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St. Mary's Hospital, London

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JOURNAL
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Vol. 24 No. 1 FRED C. ZAPFFE, Editor January, 1949

Dr. Fred C. Zapffe

At the end of his annual report as Secretary-Treasurer of the Association of American Medical Colleges, presented at the executive session of the 59th Annual Session at White Sulphur Springs, Dr. Fred C. Zapffe announced his retirement. While this means that he will have a well earned relief from his official duties as Secretary, the Executive Council at a meeting held the next day elected him as Editor of the Journal of the Association which he started in 1921 and expressed the hope that he would find it possible to write a history of the Association of American Medical Colleges. As long as Fred lives, the welfare and progress of our Association will command his first love and interest and it is most fortunate that we still will have readily available the vast background of knowledge and experience in medical education which he uniquely possesses. His information about problems in medical education and his acquaintanceship with medical educators is encyclopedic. All those who have worked with him in recent years have been impressed by his modern and forward looking viewpoint toward present and future problems and by the accuracy with which he is able to call forth past incidents and to reconstruct them with intimate detail. How important it is that he should put down in the written record his memoirs of the development of medical education in our American schools. While the printed pages of the proceedings of our Association tell much of the story, there are many things that he remembers so well that have been unpublished. It is most desirable that they be elaborated for the record as he alone can do.

He was initiated into the work of the Association when he was a medical student. The then secretary of the Association, Dr. Bayard Holmes, Professor of Surgery and Secretary of the Faculty of the College of Physicians and Surgeons, now the College of Medicine of the University of Illinois, gave him a job in his office during the summer vacation of 1894. His work consisted in helping Doctor Holmes in preparing the manuscript for a Textbook on Surgery and keeping records and conducting correspondence for the Association of American Medical Colleges.

The first meeting he attended was held in Atlantic City in 1900 where he assisted Doctor Holmes in keeping the records of the proceedings. He did

the same work in 1901. In 1902, Doctor Holmes decided he would not go to the meeting, therefore, Doctor Zapffe had to arrange the program for this meeting. A secretary was elected to succeed Doctor Holmes but he, too, refused to function so that Doctor Zapffe was again acting. In 1903, at the New Orleans meeting, he was elected secretary. He accepted the position with the resolve that he would do all in his power to bring the Association to its proper place as a factor in medical education, and to secure the membership of every good medical school in the country. At that time, membership numbered 53 of the 166 schools then in existence. The office of the Association was in his home. The equipment consisted of a broken-down typewriter.

In 1905, he persuaded the Executive Council, then known as the Judicial Council, to authorize inspection of the medical schools in membership and medical schools deserving membership. Since the dues at that time were only $5 per year, travel had to be exceedingly limited. This was the first attempt to inspect medical schools ever made in the United States. In the first 2 or 3 years, 17 schools were dropped from membership. Others not in membership were persuaded to join with the Association. Some of the present member colleges have been in membership since the Association was organized in 1890. Records of all these happenings can be found in the proceedings that were published every year. He can point with pride to the fact that practically every activity of the Association initiated by him was supported loyally by all the member colleges.

He did not receive any compensation for the first 20 years of his incumbency; then he was voted an honorarium of $1,000 which was increased in 1931 to $5,000 and in 1943 to $8,000, with increases during the intervening years.

The first office of the Association was established in 1931. In the meantime the dues had been increased slowly until they reached $250 in 1930. Then the depression affected medical schools very seriously and the dues were lowered to $150. The lack of sufficient finances has always been responsible for checking the activities of the Association, especially the travel which was important if the Association was to maintain its standing as a leader in medical education. The records of the Association reveal what his activities have been through the years.

It is not so many years ago that individual members of the Association have taken a very active interest in its affairs, probably due to the fact that changes in deanships were very numerous and are today. He has been hesitant about speaking of what he has tried to do because he has always made it a point to keep himself in the background as much as possible, giving credit to those who have helped so much to make his efforts successful. His attitude is perhaps best shown in this statement he recently made: "I am contented with what I have accomplished and I have a deep feeling of appreciation for the help

given me and the kindnesses bestowed on me by all those who have been ready at all times to give me the support I needed to carry on when things did not look too bright."

The members of society, the medical profession, and medical educators owe Dr. Fred C. Zapffe a debt of gratitude for his devotion to standards and quality which has stimulated and catalyzed our system of medical education. In his quiet, modest and unassuming manner, he has carried a torch that has lighted the way for ever improved and higher standards of performance on the part of our medical schools, whose educational program forms the keystone of our whole structure of national health. That he has not been willing to be complacent and satisfied with the status quo has been evidenced by the part he has played recently in getting the Survey of Medical Education under way. He has labored with a spirit of love and devotion to a cause that has kept him from being enticed away by offers of deanships and other attractive opportunities that have been presented him through the years. He has supplemented his income by the practice of medicine and has been a member of two medical faculties, the University of Illinois and Northwestern University, but his two loves were for the late Mrs. Zapffe, his beloved companion, and the Association of American Medical Colleges. His life has been enriched by his association with the leaders in medical education, whose photographs adorn the walls of the Association office. It has been the pleasure of many of us to have him tell about them as he affectionately pointed them out, one by one. His companionship has been a rare privilege to all of us in medical education. Whether the topic be religion, philosophy, general education, medicine, travel, politics, or the culinary arts, in which he is so proficient, he has contributed in an intelligent, objective and constructive manner. We express our sincere appreciation by saying to Fred, "Superbly done." We are deeply grateful that the late Dr. Bayard Holmes had the insight and the persuasion to attract him into the work of the Association.

At the termination of the Executive Session at White Sulphur Springs, Dr. William S. McEllroy of Pittsburgh presented the following resolution which was passed unanimously by a standing vote:

> WHEREAS: The Association of American Medical Colleges was founded in 1890 with a single purpose as stated in the original constitution, namely, the advancement of medical education in the United States, and
>
> WHEREAS: Dr. Fred C. Zapffe has served as secretary of the Association for the past fifty years and due to his complete devotion to the Association and its objectives has been in large measure responsible for carrying out its mission at times almost alone and at great personal sacrifice; and
>
> WHEREAS: Doctor Zapffe created and has edited, since its inception, the Journal of the Association of American Medical Colleges, the only

journal devoted solely to the problems of medical education and an important instrument in the advancement of medical education; and

WHEREAS: As secretary of the Association, and personally, Doctor Zapffe for a period of 50 years has rendered invaluable advice and encouragement in raising standards, especially in those medical schools laboring under great handicaps. For these and many other reasons now,

Therefore, Be It Resolved: That the Association of American Medical Colleges by resolution expresses to Dr. Fred C. Zapffe the sincere appreciation of the membership for his devoted and outstanding service to the Association and so to the advancement of medical education in the United States, that this resolution be spread upon the minutes of this meeting, and furthermore, that two copies be suitably engraved, signed by the officers of the Association, and framed; one copy to be presented to Doctor Zapffe as a token of our personal affection and esteem, the other to be hung in an appropriate place in the office of the headquarters of the Association.

(Signed) JOSEPH C. HINSEY,
Chairman, Executive Council,
Association of American Medical Colleges.

DR. FRED C. ZAPFFE

Medical Education As Seen from the Sidelines*

JOHN M. RUSSELL
Executive Director, John and Mary R. Markle Foundation
New York, N. Y.

My luck with football tickets is phenomenally bad; if I go to games at all, I am sure to be assigned seats high up in the bleachers. That location has one advantage, however. It permits comments on the conduct of the teams without fear of contradiction by physical contact.

The seat I've had at your game has been up in the stands, too—not on the sidelines as the title of this paper states. Observations made from the elevated angle of a grandstand seat may not be very sound. The truth is that most of what I know about the progress of your game I have heard either over the public address system or read about in the papers next day.

* * * * * *

If the medical school were an ivory tower, it would lean far worse than the famous Tower of Pisa. In fact, if it remained standing at all, it would be because the pressures put on it come from all directions at once. But the medical school certainly is no ivory tower; on the contrary, no other professional school in the university system touches the realities of life quite like the medical school. To most people, the effectiveness of medicine, the skill of doctors, is a life-and-death matter. It is, in fact, this very down-to-earth quality which causes most of your headaches, as deans, today. People have a more possessive interest in medicine than in any other profession, because medicine directly touches their lives or the lives of their loved ones. For this reason, they believe they have a right to examine the course of medical education and even to bring pressure on you to consider their views and their interests. This possessive feeling toward medicine is not only held by individuals but by various groups as well—among them the university, the medical profession itself, and, finally, the nation as a whole.

The university, for example, was glad to welcome you and make you a part of the academic community, but, as time passed, has found you a rather expensive luxury. Your medical schools, like the practicing physician, ask for special academic license plates and curriculum parking privileges denied others, and the university finds it necessary occasionally to apply pressure to hold your schools within reasonable academic bounds. "If the medical faculty is to have the rights and privileges of this community," says the university, "then it must share our sacrifices, too." In other words, the university thinks the medical faculty, like other faculties, should obtain its satisfactions from being educators, research workers, and teachers whose interests are in the future—in future doctors and in the increased knowledge of medical science.

*Delivered at the Forty-ninth Annual Meeting of the Association of American Medical Colleges, held in White Sulphur Springs, West Virginia, November 8-10, 1948.

But your schools are not only part of the university; they are also an important part of a highly respected profession. Doctors naturally have a great interest in the education of the next generation of practitioners and want to be certain beyond any doubt that quality is maintained. Groups of specialists, licensing boards and accrediting agencies urge the schools to maintain certain minimum standards and to provide certain types of instruction. As someone has said, "the power to examine is the power to destroy," so this type of pressure on medical schools can work two ways—for good and for bad. Unfortunately, about all an outside accrediting agency can do is to measure tangibles with the hope of lifting "standards." This often means measuring the size and shape of Mark Hopkins's famous log rather than making a thorough evaluation of the man sitting on it. It also may mean—if rules and regulations are allowed to become substitutes for thinking—that experiments in medical education will be stifled and explorations discouraged, thus leading toward an educational system with no high points or no low points. No matter which way this process works, it is surely a constant pressure on all of your schools.

The medical profession provides another type of pressure—a pressure not so easily recognized nor readily understood, especially by your colleagues on other faculties. I refer to the economic pressure which derives from medicine as a business rather than medicine as a profession. In order to maintain quality in the profession, hurdles are placed all along the medical course. Only a limited number can clear all of these successfully and finally become doctors. This process does not supply enough doctors to meet the present demand, and any elementary textbook on economics will explain what happens when demand for any commodity exceeds the supply—even doctors. The medical school finds it difficult to compete for personnel in such a "market." This is just another pressure that helps make life interesting for you!

So far, I have mentioned two groups having a very special interest in you and your schools—the university and the medical profession. To these must be added the American people, whose increasing interest and understanding of health problems, stimulated by our public schools, by the press, radio and even by the scare-the-daylights-out-of-'em tactics of certain money-raising agencies, result in ever-increasing demands on all of you. The people, represented by associations, societies, foundations, and government agencies are insisting on adequate medical care at less cost. They want more and better educated doctors. They want doctors with broader training and more sympathy and understanding of their problems. They want more doctors in rural areas, more in industry, more for the army and navy, and more for public health. They want more teachers and research workers. They want prompt action on cancer, on polio, on arthritis, on heart trouble and other dramatic diseases. They are giving their dimes and dollars, as well as money collected through taxation, in order to spur you to action. What is more, you are accepting their money. The demands of the public, especially when backed with dollar bills, are difficult to withstand.

So, from my seat up in the stands, it looks as if you had at least three extra

quarterbacks on your team, with the result that you are taking a beating. Your own universities are calling signals; your own profession is calling signals; and even the general public is telling you what to do next.

• • • • • •

If the affection people bestow on you and the interest people have in the way you conduct your affairs is causing you serious difficulty, I would think the addition of the many internal problems of medical schools would make life unbearable for you. Up where I sit, I overhear a good deal of talk about some of the troubles you are having. I don't need to tell you what these problems are. However, it might be interesting to list a few, so you will know what the spectators at your game think they are, and also to indicate some of the related questions being asked by the vocal ones in the stands.

Here are some of the problems, starting off with a real old-timer—the unbalanced budget. I suppose some dean, somewhere, sometime, somehow, has balanced his budget, but I have yet to hear one admit it! Even if some of you do get out of the red occasionally, I suspect few could show a balanced budget in the sense of support of a balanced educational diet. But this needs no emphasis. All I need say is—if you can't make ends meet in times of plenty, what of tomorrow?

Next—teaching and research personnel. How much longer do you think medical education can depend so largely on dollar-a-year men and on men with financial independence? In general, are the men on your faculties perfectly clear as to the true mark of distinction in academic medicine, or is there some confusion in their minds between, say, the Nobel Prize on the one hand and two Cadillacs in the garage on the other? Do you encourage the most capable men to enter teaching and research? Can you do it by hiding behind Alma Mater's skirts and offering one-year instructorships at arts college pay to older men with many more years of training than arts instructors? That, surely, is a problem you all have to face.

Students—recruitment, selection, and training—are next on the list, and here are some more questions. Is the best talent available being recruited? Do students arrive on your doorstep with a broad-gauged training that will make them good citizens as well as good doctors—and, if so, do they remain that way through their years under your roof? And what will your admission experts do when government scholarships make our so-called free education really free? Selection of students, then, will certainly be near the top of your "problems-for-today" baskets. As to the training of students, a wise educator once said (he wasn't referring to medicine particularly), "The problem of the professional curriculum is to choose those subjects which have the most direct bearing on practice and within each subject those materials which can best be presented within the time allotted." Is this the basis for your curriculum?

And now I come to research and teaching! Though funds for research have increased amazingly, actually you don't seem to be very happy about it. Is it

because you don't like to be treated like birds, opening your mouths so Uncle Sam, foundations and fund-raising societies can drop in a juicy worm? Or is it because you don't know where the next worm's coming from—or whether it is coming? Whatever the reason, I suspect research holds many problems for you, not the least of which grows out of the widely-held belief that a good research man is also a good teacher. Could it be that that particular sacred cow is part bull, and might it not be a good idea to consider shooting her—or him—now? You remember when Flexner said many years ago that research keeps teachers in condition, he also said that there is plenty of room for purveyors and distributors of new ideas. Does today's emphasis on research mean that teaching is neglected?

I could easily lengthen this list of problems, but I think I have already demonstrated that the bleacher-ites are aware that your difficulties are many and real. They also appreciate that you are attacking these problems, and many like them, in a variety of ways. But if some sympathy and a reasonable amount of understanding are a comfort, you certainly have both from your friends in the stands.

* * * * * *

It has often been said that universities, and the professional schools that form them, are the best judges of their own educational activities. This includes the standards to be established, the staff to be selected, the courses to be offered, and the research to be conducted. In other words, you—the medical deans—are the best judges of your own activities. With this, I fully agree. I believe the genuine medical educator is the only person who can see the whole picture of medical education, unprejudiced by personal interests. It is because of this conviction that I ask, "What do *you* propose to do about medical education?"

With all the pressures brought to bear upon you from without and with all the problems pressing from within, has not the time come when you must, above all else, maintain your independence of action—your freedom to solve these questions as educators and in your own way?

To retain independence is not easy. To be independent requires vision—an ability to see ahead and to plan for the needs of the future; it requires the same intense interest and belief in the value of experimentation and development in medical education that you show in your scientific laboratories; and it requires a full understanding of what medical education is and its place in training doctors for the future of this country—not for the past.

To be independent requires forceful leadership and drive that will carry through to the end.

To be independent requires full and complete cooperation of every medical school and every medical educator, working together toward a common goal.

Cooperation and leadership will make you independent and keep you free to work out your own problems as educators really should.

Obviously it is difficult to find true leaders in any field. Universities and professional schools are always on the lookout for that rare combination of scholar-administrator-leader to fill the all-important post of dean. It was therefore something of a shock to discover how unimportant and unessential some people believe the post of medical dean to be. It seems to me that in too many schools, the deanship is a job no one wants and in too many schools it is looked upon as a part-time occupation. Appointments as dean are not generally accepted unless part-time research or teaching is permitted, and, in some cases, even private practice. In fact, some schools have two part-time deans on the assumption, I gather, that two half deans equal one whole dean!

Actually, with the exception of the central administration, the medical school dean faces the biggest problems within a university. He runs the school which makes the largest drain on the university's resources. If the job is done well, the medical dean should be the busiest man on the campus, with perhaps the possible exception of the president. He holds a position requiring real administrative ability and full time attention to management. The job also requires an ability to lead men, to gain their respect, and to obtain their cooperation. There should be a prize of prizes for the dean who breaks new ground in education and thereby makes possible the advancement of medical science.

A good dean can tackle the internal problems of a medical school with some hope at least of seeing them solved, but only a dean of a large and strong school can, by himself, withstand the demands of outside pressures. While many of these outside pressures may be termed "suggestions," they do have force—a dollar-and-cents force difficult for most of your schools to withstand. Obviously the only effective way to combat these influences and maintain your independence as educators is to work together. If, as educators, you decide what is best, then, if you will stand together, you can meet any pressure from any direction. By "together," I should add, I do not mean just the state schools, or just the Negro schools, or just the Canadian schools, or just the church schools, or just the private schools. I mean all the schools genuinely interested in the improvement of medical education, and within those schools, all the real medical educators.

In the Association of American Medical Colleges you have an organization representing all schools and all medical educators, with medical education its sole interest. It has served you well for many years, and Doctor Zapffe has done a yeoman's job, sometimes almost alone. If you give the word, it can serve you even better in the future.

So, to conclude, I am suggesting: first, that the medical deans assume the leadership in medical education and hence in the profession; and, second, that you work out your problems as educators together through the services of this Association. If you don't assume full control of medical education, others will. These suggestions come from only one of the thousands of ardent fans who are cheering you from the sidelines and wishing you every success in the solution of your own problems in your own way.

A Method for the Curriculum Integration of Audiovisual Aids in Preventive Medicine and Public Health*

DAVID S. RUHE
Surgeon, The Communicable Disease Center, U. S. Public Health Service
Atlanta, Ga.

and

TRAWICK H. STUBBS**
Dean, University of Missouri School of Medicine
Columbia, Mo.

INTRODUCTION

Audiovisual aids have played an important role in the teaching of medicine. The modern audiovisual tools can shorten, intensify and improve medical instruction. But the methods are not yet clearly defined whereby these important tools of teaching can best be woven into the fabric of medical training, rather than standing apart from it as mere supplements to be used if time and equipment permit. The fusion of medical technical experts, medical teachers, and educational film personnel has nowhere yet occurred on a sound and mutually acceptable basis. And only through such a fusion will classroom aids of optimal usefulness be produced and become available for the teaching of preventive medicine and public health.

Over the span of the past thirty years many persons have recognized the need for curriculum integration of audiovisual aids, and have attempted independently to outline the film† needs of the medical curriculum. One broad attempt to state the overall medical school needs was made in 1946, when the Scientific Film Association (Britain) compiled the answers to a letter of request sent to the deans of the British schools and to certain of the British learned societies.[1] In the words of Dr. Ronald MacKeith's letter of transmittal, this list is "Not a deep study of the place of the film in medical education," nor does it contain its proper complement of film thinking. The 1947 report of the Committee on Audiovisual Aids of the Association of American Medical Colleges[2] on the need for a Medical Film Institute contained an essay on the possible subjects for audiovisual units. These two compilations supply a basis for much more thorough considerations of total medical school curriculum deficiencies in

*A Preliminary Report by the Committee on Audiovisual Aids, Conference of Professors of Preventive Medicine, and the Production Division, The Communicable Disease Center, U. S. Public Health Service. The 1948 Committee on Audiovisual Aids comprises: (Chairman) Dr. Everett S. Sanderson, U. of Georgia; Dr. Trawick H. Stubbs, Emory U. and U. of Missouri; Dr. Thomas J. LeBlanc, U. of Cincinnati; Dr. William A. Sodemann, Tulane U.; Dr. Robert L. Simmons, Louisiana State U.; Dr. John J. Phair, U. of Louisville; Dr. Milford E. Barnes, U. of Iowa; Dr. William W. Frye, Vanderbilt and Tulane Universities; Dr. Franco Mortara, New York U.; Dr. Bruno Gebhard, Western Reserve U. and Cleveland Health Museum; Dr. Franklin H. Top, Wayne U. The Communicable Disease Center Production Division staff members contributing include: Mr. Gale C. Griswold, Chief; Dr. David S. Ruhe, Script Development Branch; Mr. Merle I. Wimmer, Utilization Branch; Mr. Lawrence B. Hall, Executive Officer.

**Formerly Assistant Dean, Emory University School of Medicine.

†The word "film" will be used frequently hereafter as a term for ALL audiovisual aids. New word coinage is badly needed in this area of teaching.

visual materials, and for study of the needs of the various specialty groups. There is great value in the spontaneous and solicited information of experienced medical teachers, but these collations lack both the catalytic ingredient of group discussion and the leaven of honest film knowledge.

In the United States the most frequently employed approach in examining the medical curriculum has been through the agency of the special-interest groups. The American College of Surgeons has outlined an Expanded Program of Medical Motion Pictures, to be produced under the supervision of the Advisory Committees of the College.[3] The organized audiovisual committees of the anatomy, bacteriology, pharmacology, and ophthalmology-otolaryngology specialties (among others) have received numerous spontaneous requests for visual materials. Nevertheless it seems likely that the efforts of the Conference of Professors of Preventive Medicine have been the most concerted, continuous and systematic among the specialty organizations.

The results of these efforts are inconclusive at this time. However, the method of organic attack on this single course of preventive medicine warrants a preliminary report. It may well be that the entire project may constitute a pilot experiment in this crucial area of curriculum integration.

DEVELOPMENT OF THE PROGRAM

In October, 1944, the Conference of Professors of Preventive Medicine appointed a Committee on Health Teaching Films. Dr. W. W. Peter was appointed the first chairman and the committee principally comprised the outspoken advocates of audiovisual aids, the enthusiasts who felt that the teaching of preventive medicine could be greatly improved by the production and use of effective visual materials. The reports of Dr. Hugh Leavell,[4] and the discussions of the Ann Arbor Conferences[5] of the Professors of Preventive Medicine have since crystallized the conviction which originally inspired the formation of the committee: that the teaching of Preventive Medicine required (among others) a strong stimulant in the form of effective audiovisual aids.

The committee's first active step, in February, 1945, was the issuance of a questionnaire on the actual usage of visual aids. This questionnaire was sent to most of the teachers of preventive medicine and to teachers in the schools of public health and hygiene. A second questionnaire amplified the first. And the summarized replies[6] indicated six points: (1) that motion pictures (both silent and sound) were used by four out of five medical schools in teaching preventive medicine and public health; (2) that the utilization of this medium was increasing each year; (3) that professors of preventive medicine and public health were dissatisfied with the quality of the films available; (4) that there were more than fifty sources of such films; (5) that there was difficulty in getting information concerning existing films, and frequently in obtaining the films themselves; (6) that there is general interest in some type of clearing house for films.

These points independently reflect what is generally well known: that medical teaching films are valuable, but are highly disorganized in production, distribution and utilization.

The second annual committee, under the chairmanship of Dr. E. Gurney Clark, proposed[7] the setting up of the needed clearing house for health teaching films, with a full time paid secretary, in order to facilitate and develop better utilization of available films. The critical appraisal of existent films was suggested as being the principal duty of the committee.

In the fall of 1943, Dr. Thomas LeBlanc of the committee had sent a letter of inquiry to the Public Health Service requesting the cooperation of the Service. A reopening of this first approach brought, in November, 1946, at the American Public Health Association Convention, response from the Production Division of the Communicable Disease Center, U. S. Public Health Service. It was suggested then that the long range objectives of the Service overlapped in considerable measure those of the Conference of Professors of Preventive Medicine. A joint consideration of mutual objectives appeared imperative. A preliminary proposal was made by the Conference that the Communicable Disease Center engage in a cooperative production effort in the area of milk sanitation. And, in view of the propinquity of the Emory University School of Medicine with the Communicable Disease Center in Atlanta, Dr. Trawick H. Stubbs, then Associate Professor of Preventive Medicine, was named new chairman of the Committee on Audiovisual Aids to facilitate the development of effective early collaboration.

The recommendation of the two former committees had centered about the critical appraisal of existing films, although hopefully there had been discussion of "the stimulation of production in barren fields." With the advent of professional film production facilities potentially available in the Communicable Disease Center, the opportunity had arisen for achieving true curriculum integration in all aspects of audiovisual aids in preventive medicine.

On August 25-27, 1947, a three day conference was held in Atlanta at the Communicable Disease Center, with members of the committee present, plus certain others of the conference who came from convenient distances and who were invited to be present. Those participating were Dr. Milford E. Barnes (Iowa), Dr. Thomas J. LeBlanc (Cincinnati), Dr. William W. Frye (Vanderbilt), Dr. Bruno Gebhard (Western Reserve and Cleveland Health Museum), Dr. William A. Sodemann (Tulane), Dr. Franco Mortara (N. Y. U.), and Dr. Trawick H. Stubbs (Emory). Representing the Communicable Disease Center were Mr. Gale C. Griswold, Mr. Merle I. Wimmer, Dr. David S. Ruhe, and Mr. Lawrence B. Hall.

It must be noted at the outset that the committee comprised men keenly appreciative of audiovisual materials, that almost all had at one time or another ventured into film-making for their own teaching purposes at their own expense, and that all were constantly employing available films in their classrooms. Each man was an enthusiast, well oriented in the general aspects of visual aids, and highly responsive to the stimulus of the group discussion.

The agenda of the meeting were clearly pointed toward a broad definition of the needs of the preventive medicine course in the medical schools. The milk

sanitation series which had been proposed in November was discussed. The existing films on milk sanitation had been collected, and were reviewed by the group. But it was evident from the first that the whole teaching course required overall examination, rather than any detailed consideration of parts of the course, however high their priority. A prolonged analysis of teaching needs in preventive medicine was carried through. The productions suggested were considered for their relationships one to another and to the course proper. The difficulty of teaching various subjects, and their applicability to visual treatment was considered. Urgency of need was used as the first yardstick of production priority. But the Communicable Disease Center made it clear that it alone could finally decide when production could begin, on the basis of the ramifications of its total program, in which the units in preventive medicine were one segment. The special position of the course in preventive medicine was defined within the medical school curriculum. The emphasis in teaching in the complete curriculum was indicated to be upon clinical training and clinical motivation. The weakness of the average course in preventive medicine was freely admitted, along with the much higher interest level of the competing clinical courses. And the need was shown for correspondingly stronger and more intensive use of superlative audiovisual materials.

The committee devoted much attention to accumulated grievances against the films they had used over years of teaching experience. The criticisms ranged across the breadth of film production and utilization. Many of the complaints may be leveled justly at a majority of so-called teaching films: that they are too expensive, too difficult to obtain, too hard to project, too amateurish in production details, and not aimed accurately at a single audience. To these common denominator criticisms were added a few somewhat less familiar: that the pace of the films was too fast or too slow (Hollywoodish or amateurish); that the titles were shown for far too long a time; that music was distracting rather than an asset in all but a very few films, and suggested entertainment rather than teaching; that most films attempted to tell too much, and therefore could be used only under special conditions; that films too frequently showed idealized situations and things, where representative samples would have been more instructive.

Five principles of presentation were recommended, in order that the new productions might fit medical school specifications: 1. That all units shall be aimed at the average medical student, who is to become (in top-heavy proportion) a clinician; that the fundamental approach to capture the interest of such an average student must be through clinical springboards. 2. That there shall be no music unless it has a clearly justifiable reason; that music in a training or instructional film is intrusive rather than valuable. 3. That the pace of presentation of titles and content alike must be geared to the higher-than-average perceptions and grasp of the medical student. 4. That a representative range of samples and methods should be shown, rather than one more or less typical (or idealized) situation. 5. That actors should be avoided in technical productions as far as possible, since small errors constantly identify them as actors;

that the problem should be solved by suitable care and effort in casting technically trained persons who possess the instinct and poise for acting, and whose convincing skill will carry the audience through any minor lapses in acting.

From the winnowing of three days of directed discussion there emerged a program which represents the production goal for the near future.

PRODUCTION PROGRAM BY WORKING TITLES

I. Environmental Sanitation
1. *Milk:* General Statement, Preventive Medical Aspects.
2. *Water:* General Statement, Preventive Medical Aspects.
3. *Sewage:* General Statement, Preventive Medical Aspects.
4. *Food:* General Statement, Preventive Medical Aspects.
5. *Industrial Hygiene:* General Statement, Preventive Medical Aspects.

II. Public Health Practice and Methods
1. *Case Histories Demonstrating the Social and Environmental Factors of Preventive Medicine.*
   a. Tuberculosis.
   b. Peptic Ulcer.
   c. Rheumatic Fever.
   d. Chronic Arthritis.
   e. Venereal Disease.
2. *The Physician and the Social Facilities at His Present Disposal.*
3. *Public Health Organization:*
   a. Health Organization in the United States.
   b. The World Health Organization.
   c. Federal Health Agencies and Their Organization.
   d. State Health Organization.
   e. Local Health Organization.
   f. Voluntary Agencies and Their Organization.
   g. Industrial Health Organization.

III. Epidemiology: Communicable Diseases in the Human Herd
1. General Phenomena of Epidemics.
2. Milk-borne Epidemic.
3. Water-borne Epidemic.
4. Fly-borne Epidemic.
5. Food-borne Epidemic.
6. Animal-Reservoir Disease Epidemic.
7. Insect-borne Disease Epidemic.
8. Respiratory (Droplet)-borne Epidemic.

IV. Clinical Infectious Diseases of Preventive Medical Importance
1. Smallpox.
2. Diphtheria.
3. Typhoid.
4. Rabies.
5. Typhus (Murine)
6. Measles.
7. Streptococcosis, including Scarlet Fever.
8. Leprosy (Early Clinical Manifestations).

V. Disasters and Health Emergency Measures
1. Fire.
2. Flood.
3. Storm.
4. Explosion.
5. Miscellaneous.

It must be pointed out that, in the development of this coherent list, a number of subject-matter areas were knowingly relegated to later attention. Preventive mental hygiene, while freely given top teaching importance in this hour of social dislocation, nevertheless could not at this time be clearly enough defined

and agreed upon to be listed, in terms of a series of units. The preventive aspects of geriatrics were by-passed at this time. Medical economics was felt to be too contentious an issue for this hour and this combination of school and governmental interests. And, while all of preventive medicine was lightly touched upon in this searching surveillance of teaching needs in the total course, general agreement was reached only on the thirty-four primary production units. Five disaster units were included in order to be ready for filming when fire, flood, storm, explosion or other catastrophe might occur.

A fortunate coincidence permitted a very early reconvening of the committee. The American Society of Tropical Medicine met in Atlanta at the end of November, 1947. Committee members, plus others of the Conference enroute to the meetings, met with the Communicable Disease Center Staff to discuss and preview new motion pictures which would be of interest to the teachers of preventive medicine. Experimental film types were demonstrated and discussed: motion picture shorts (illustrational-demonstrational films), study films, and category film strips. Evaluational techniques were superficially examined as they might apply to the Committee's work of film review and information.

The crux of the Conference was the systematic examination of the role of the teachers of preventive medicine throughout the several years of film, film strip and slide production represented by the production list of the previous conference. The detailed process of production through which each true teaching film must go was covered. The tasks of the professors were defined for each major step of production, for pre-planning, script writing, technical production, evaluation and utilization. The Professors of Preventive Medicine were shown to be consultants on both the scientific content and educational methods. Suggested scientific consultants were listed for each of the thirty-nine units, and a similar list of suggested educational consultants was supplied. The time factors of production were underlined, and a time code was written, for satisfactory relations between Communicable Disease Center production personnel in Atlanta and the Professors of Preventive Medicine afield. Finally, preliminary discussion was opened on pre-release and post-release film evaluation, as safeguards of film quality and effectiveness. The classroom of every professor-participant was made available for any evaluational experiments which seemed desirable and for which a program could be developed. It was indicated that evaluation studies were one of the principal functions of the committee, and one which required a great deal of further exploration.

The procedures agreed upon and their intrinsic time relationships are worth noting, because the making of any teaching film commonly requires a full year's steady application by everyone involved. In order to shorten this time factor there is a real necessity for prompt action in script reviews, pre-release evaluations, etc. These points of cooperative action follow; and the final paragraph of the procedure summarizes these tentative agreements:

1. Teaching advisers have been designated for each film unit, from among the members of the Conference of Professors of Preventive Medicine; their function will

be to supply advice apart from, or in addition to, the technical advisers; their advice will have special reference to actual teaching usage in medical school classrooms.

2. A production outline (or analysis) will be sent to the designated teaching and technical advisers, with a covering letter from the project supervisor, and enclosing the agreed-upon instruction sheet prepared for this purpose. One week allowed for comment.

3. Script treatments will be sent to the designated teaching or technical advisers, again with a covering letter from the project supervisor, and again enclosing the agreed-upon instruction sheet prepared for this purpose. One week allowed for comment on each script treatment. The professor will send a covering letter, affirming approval, when this is called for.

4. At the time of completion of the film, the fine-cut work print and a Communicable Disease Center-approved narration will be interlocked, duped, and a trial composite will be made for preview; 6 prints will be made and sent to the field. Test groups: New York U., Dr. Henry E. Meleney; U. of Iowa, Dr. Milford E. Barnes; Tulane U.-Louisiana State U., Dr. William W. Frye and Dr. R. L. Simmons; U. of Cincinnati, Dr. Thomas LeBlanc; U. of Georgia, Dr. Everett S. Sanderson. One week's time permitted for preview and/or classroom student evaluation. Professors will send signed approvals.

It is imperative that agreed procedures shall be followed on all films, film strips or other material being prepared for the Conference of Professors of Preventive Medicine. A great deal will be learned from this cooperative effort. The teaching value of each unit can be reasonably well assured. And the approval, after test, of the teachers themselves will be a relative guarantee of assured audiences.

The Conference discussion can be summarized in three generalities: (1) that the teachers of preventive medicine in the medical schools are anxious to guide and advise upon the message and content of the curriculum-integrated films which they need for their courses; (2) that they are willing and able to spend the required time in reading production analyses and script treatments, in previewing work prints, or trial film strips, and in making classroom evaluations; (3) that they are very anxious for the interplay of production unit with teaching group to develop as speedily as possible in order that both films and teaching may constantly be improved.

An invitational conference of interested professors and workers in the field of Public Health and Hygiene followed the same meeting of the American Society of Tropical Medicine.* This group reviewed the progress of the production program development of the Professors of Preventive Medicine, and strongly affirmed the need for identical visual units for the classrooms of the Schools of Public Health.

The cooperative efforts of the Communicable Disease Center and the Conference are moving forward. Certain fruitful avenues of exploration in visual aids are being pursued, such as category film strips for wholesale slide dissemination, large scale production of illustrational-demonstrational films, and others. Informational channels to the entire group are to be developed. Improved utilization of all visual aids is being fostered. Further conferences have been outlined, and funds are being sought for support of the entire program.

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*Public Health Personnel: Dr. William W. Cort and Dr. Gilbert F. Otto, Johns Hopkins University; Dr. John H. Watkins, Yale University; Dr. J. C. Snyder, Harvard University; Dr. José Oliver-Gonzàles, School of Tropical Medicine, San Juan; Dr. Marshall Hertig, Gorgas Memorial Laboratory; Dr. Louis L. Williams, Jr., Division of International Labor, Health and Social Affairs, Department of State. Communicable Disease Center personnel: Dr. Justin M. Andrews, Mr. Gale C. Griswold, Mr. Merle I. Wimmer, Dr. Malcolm S. Ferguson, Dr. David S. Rube.

RESULTS OF THE PRODUCTION PROGRAM

In the ten months since the second conference was concluded certain limited progress may be recorded. It must be pointed out that the Communicable Disease Center Production Division acts in three distinct roles in the collaborative effort: (1) as producer of certain units which clearly are functional within the scope of the Communicable Disease Center program; (2) as agent to produce other units for other divisions of the Service at their expense and with their support; and (3) as agent to farm out units to the other government film organizations or to commercial producers. The order of precedence of production continues to be determined by the Communicable Disease Center in accordance with the prior or parallel commitments of the Production Division. Many units of the program have been assigned to project supervisors for initiation as their work schedules permit. The following films are under production. Working titles are given.

1. "The Epidemiology of Murine Typhus" III-6,* black and white motion picture, released October, 1948.
2. "Clinical Murine Typhus Fever" IV-5,* Black and white motion picture, to be shot Fall, 1948.
3. "Health Organization in the United States" II-3a,* in preliminary planning stage.
4. "Federal Health Agencies" II-3c,* in preliminary planning stage.

The disaster units have been surveyed and action outlines prepared for use when disasters make possible certain of the field shooting.

The time factors in film production are inordinately long by the standards of those outside the film profession. In the Communicable Disease Center program prior film commitments are steadily being concluded. Those units which parallel or overlap the field programs of the Communicable Disease Center are being placed on the production schedule. The Communicable Disease Center has begun negotiations with other divisions within the Public Health Service for the support and financing of certain units. Others of the federal film agencies are being approached for their consideration of certain listed units, under the terms of cooperation preliminarily agreed upon with the Conference. The Interdepartmental Committee on Medical Training Aids (U. S. Government) and the proposed Medical Film Institute of the Association of American Medical Colleges will provide production outlets for the units which do not fall under the policy limitations of the Communicable Disease Center.

DISCUSSION

Up to the present hour a relatively consistent effort has been expended by both the teacher group (the Conference of Professors of Preventive Medicine) and the production unit (The Communicable Disease Center). Both organizations have a fundamental similarity in long range interests and objectives. Both have merged their interests in order to analyze in audiovisual terms the special needs of the course in preventive medicine.

*For code, see previous list.

At the time of the linkage of the two groups the Conference of Professors of Preventive Medicine had on the one hand already geared itself to effective audiovisual thinking; and the state of its film affairs had been roughly sketched through two mail questionnaires. On the other hand, the Communicable Disease Center of the U. S. Public Health Service (and its antecedent agencies) had been interested for five years in certain aspects of preventive medicine, and had produced films of value both for professional instruction and for field public health programs. The two groups were highly fusible. The production program list represents a solid landmark of progress toward organic curriculum integration within the course of preventive medicine in the medical colleges. Personnel relationships have been established toward constant extension and improvement of the basic program. Many tasks yet remain to be initiated. Some must be greatly improved. All may better be discussed in relation to the six areas which comprise the total problem of curriculum integration of visual aids.

From the outset a series of six major tasks has been developing. Growth of the program has permitted a broad formulation of these logical steps toward achieving curriculum integration of effective visual aids. It is convenient to broadly indicate first the ideal solutions as far as they can be outlined, and second to show the stage of progress so far accomplished by the Conference.

I. THE STATE OF AUDIOVISUAL AIDS IN PREVENTIVE MEDICINE

1. The audiovisual materials now available must be methodically obtained, reviewed and appraised critically by a representative panel of persons, including qualified technical experts, educators and film makers, and cataloged for teachers afield. The critical appraisal must be made with special reference to the demands of the course in preventive medicine and public health.

2. The questionnaires already issued and tabulated by the Conference are only the most cursory outlines. It seems likely that the results already obtained sharply indicate that true curriculum-integrated films do not exist; that there is no serious impediment to free experimentation; and that there is no important backlog of useful materials. More inclusive questionnaires might derive valuable information. In any event, systematic critical appraisal of all materials must be begun as soon as possible.

II. THE BROAD SURVEY OF AUDIO-VISUAL NEEDS IN PREVENTIVE MEDICINE

1. The professors of preventive medicine, with assistance from competent educational film professionals, must broadly mark out the boundaries of need for the course in preventive medicine and public health. Audiovisual criteria must be applied to each area of teaching, with special reference to recognized teaching problems.

2. Such broad survey of the course needs has been accomplished in the initial conference, with the development of the first Working Production Program. Certain series of units have been scheduled for future discussion. This task must be altered at intervals, along with the changes in course structure, and the changes in medical concepts themselves.

III. THE DETAILED EXAMINATION OF AUDIOVISUAL NEEDS IN PREVENTIVE MEDICINE

1. Specialists in each narrow area of interest, with assistance from film professionals, must analyze in considerable detail the course elements. In the verbiage of educational films, thorough and competent pre-planning must be done, in epidemiology, in environmental sanitation, in infectious diseases, etc.

2. Six areas of special interest within the preventive medicine course have been examined in detail. They are included in the Production Program. Similar definition of other needed elements within the course is projected for future conferences.

IV. THE PRODUCTION PLANNING OF EACH PRODUCTION UNIT

1. Each unit must be developed on the highest possible creative level, with the greatest possible tapping of the resources of both the teachers of preventive medicine and of the professional film makers. Each film must pass through good script development, with necessary story boards and story conferences; must be processed through technically competent production facilities under constant creative direction; and must be tested in the classroom before there is wide distribution and usage.

2. As each audiovisual unit enters upon the production flow line, research, script and production are the sum of very detailed collaboration between technical, educational and film personnel. A few films have so far been initiated. Much more energetic prosecution of production is desirable.

V. THE EVALUATION OF FILMS IN THE CLASSROOM

1. It is possible to devise and utilize pre-release evaluation techniques employing the student as the final arbiter of teaching value. Such evaluations, when following more closely controlled and integrated production, should reveal unsuspected mistakes, suggest valuable improvements, and should provide lessons to be built into new units.

2. No evaluation has yet been carried out. This must be implemented as the prime objective of the project. Evaluation is the key to sound classroom utilization, the proof of the pudding.

VI. THE DISTRIBUTION AND UTILIZATION OF AUDIOVISUAL AIDS IN PREVENTIVE MEDICINE

1. Regular channels of information must be developed. Demonstrations must be given. Training courses for teachers in the effective utilization of visual aids ultimately may be indicated.

2. The Conference of Professors of Preventive Medicine has begun a clearing house of information in the office of the Audiovisual Committee Chairman; periodic bulletins on all aspects of distribution and utilization are planned; and the flow has already begun. The Communicable Disease Center will send its release announcements through the Committee's mailing channels. The scope and details of this aspect of the program are projected for future conferences.

It is plain that the successful maturation of the collaboration between the Conference and the Communicable Disease Center will consume several years of experiment. Solid first steps have been taken. The pathway has been plotted. The new steps will require thought and work.

SUMMARY

The Conference of Professors of Preventive Medicine and the Communicable Disease Center, U. S. Public Health Service, have collaborated in a program to produce curriculum-integrated audiovisual aids. The method of approach has been recorded in this preliminary report.

Questionnaire surveys have shown the current unsatisfactory state of affairs in the use of audiovisual materials for the teaching of preventive medicine in the medical colleges. Two conferences have established an initial production program of thirty-nine units in five series. Work has been begun on a few film units. Methods and procedures for technical and educational consultation have been agreed upon. Further development of the important classroom evaluation technics is projected for later conferences and for field trials. The dissemination of all types of audiovisual information has begun through Conference channels.

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A New Approach to Medical Films

AN INFORMAL COMMENTARY ON A WORK IN PROGRESS

BERNARD V. DRYER
Special Consultant, National Cancer Institute, U. S. Public Health Service
Bethesda, Maryland

An ancient phrase reminds us that there is nothing new under the sun, and this holds true for the use of films in medical teaching as much as in any other endeavor. Since 1905,* when the Boston Medical and Surgical Journal, in reporting on the pioneering films of Dr. Walter C. Chase, wrote of his "moving" pictures of the convulsive phenomena in epileptic seizures: "There can be no question that the hour is ripe for this innovation and that the immediate future will see its general introduction into our medical schools . . ."—since that day the potentialities of films as an aid in teaching medicine and the allied sciences have lain at the right hand of medicine waiting to be fully realized.

To be sure, when the National Cancer Institute of the United States Public Health Service and the American Cancer Society began their joint project of producing graduate teaching films in cancer, it was known that literally thousands of films had been made by physicians and clinical photographers. It is with no attempt at facetiousness that one might add, in the manner of Gertrude Stein, that a film is a film is a film—but whether or not any given film is successful in teaching is quite a different question.

A NEW APPROACH TO MEDICAL FILMS

Today, among those educators most experienced and enthusiastic about audiovisual aids in professional education, there is a growing feeling that a series of films, each dealing with a separate, readily assimilable facet of a complex central subject, lends itself to the practical exigencies of teaching better than does the single omnibus picture. With this in mind, when the planning began on how to present the complex subject of cancer in films, we proceeded on the basis of making a series rather than a single picture.

And, it must be said immediately, there was a good deal of planning. We remembered that time and again physicians had plunged into "making movies" armed with little more than a vacation camera; usually their films were highly individual in nature, shot continuously from a static point simply by aiming the lens at the subject, and designed only to show some technique of the author or to record some phenomenon. Almost always the author had to accompany his film, and, to add to the limitations on the widespread use of such amateur films, there were very few (if any) copies made of the original. There is a high and honorable place for just such grass roots attempts on shoestring

*The writer is indebted for this historical information to Dr. Adolf Nichtenhauser, Consultant Bureau of Medicine and Surgery, Navy Department.

budgets, despite their many limitations, but it was our feeling that it was no way to make films that could be shown universally to physicians—preferably, but not necessarily, under the guidance of a teacher or chairman—films that would truly add something to the knowledge of a difficult subject. Also we wanted to make certain that we printed enough copies of our films to make them easily and quickly available almost anywhere in the country.

In the accurate definition of a problem, it is said, lies half the solution. Our planning began with just such a definition:

1. Our major audience was to be made up of family physicians, for any attempt to attack the cancer problem immediately must place this man at the spearpoint of the effort. It is he who sees the patient first in most cases; it is he who has the opportunity to suspect cancer early; it is he who can undertake the management of his patient so that early diagnosis and, if necessary, adequate prompt treatment follow as quickly as possible.

2. Another audience that might find professional level films on cancer useful was made up of senior medical students. This required stress on basic principles, and a minimum of those specific anomalies which could be taught better in the classroom, the clinic, and the text book.

3. If such cancer films were to be shown at medical society meetings, staff conferences, and in medical schools, it was necessary to keep the running time of any one film to the most practical length—preferably a half hour. This question of running time raised corollary problems which will be reported later in this commentary.

4. Color film, rather than black and white, plus a sound track, seemed to answer the educational requirements of the film best. Since it was our hope, in part, to reproduce clinical signs as much as possible as a physician would see them, the latest type of color film became a requirement rather than a pretty luxury. Also, in those sequences in which animation was used, the adroit use of color changes would act as a kind of pointer to lead the eye to the key element in each section of the picture. The sound track was to be used as sparingly as possible, as a device to underline and extend the visual stimuli, not as an opportunity to indulge in a torrent of speech, personal comments, detailed footnotes, and editorial opinion. We hoped, not to use words and pictures, but to blend both with such split second precision that the viewer would get only a single total impression which might be described by a hyphenated term: word-and-picture.

5. Since it was agreed from the outset that we would adopt the concept of a series, the subject of each film might well be decided in advance. After much discussion the wisest plan seemed to be that of making an introductory film, general in scope, which would serve as a point of departure into the following films, each of which would go into some basic aspects of the diagnosis of cancer of a specific body site. It is this first, the general film, on which pro-

duction has just been completed under the title: "Cancer: The Problem of Early Diagnosis." Production of the second film, tentatively titled, "The Diagnosis of Breast Cancer," is now underway. The entire series will carry the master title, "Cancer," followed in each film by a specific subtitle; this was planned to aid teachers and conference organizers who might be looking through catalogs under the usual subject matter heading of cancer.

If, with that special kind of wisdom that comes with hindsight, it now seems that we stressed the obvious and laboriously analyzed the simple, one only has to look at a score of so-called medical teaching films, chosen at random, to realize how rarely the authors appear to have known with complete clarity why they were making a film, for what audience, covering what kind of subject matter, and what teaching goal they hoped to attain. Time and again the specialist who was author or technical advisor of the film gives the impression of swinging between a compulsion to be encyclopedic and an equal need to meet the less detailed requirements of general audiences, with the frequent result of satisfying neither.

The discipline of self examination gave our project a minor negative virtue. We agreed on what we did not want to accomplish, and that was quite simply put, indeed: there was to be no attempt to make a "cancer specialist" of anyone through the touchstone of visual education! If we could bring to the busy physician (who must often read while he runs) a brief, compact presentation of a difficult subject which might face him any day, one facet at a time, that was quite enough.

Now that we had outlined the blueprint of the "house" we wanted to build, "construction" could begin. Our technical advisers were to be Dr. Charles Cameron, Medical and Scientific Director of the American Cancer Society, and Dr. Austin V. Deibert, Chief, Cancer Control Branch, of the National Cancer Institute. The National Advisory Cancer Council discussed the project at its inception, and approved it. Audio Productions, Inc., of New York City, was chosen to do the job.

Rather than begin, as frequently happens, by shooting film "off the cuff" and editing later, we made a very careful outline of the subject matter which the first film should properly encompass. There were five subject matter "areas" which the technical advisors felt should be included in a general film of one-half hour length for professional audiences:

1.—*A brief historical introduction* in which would be re-enacted the pioneering attempt in 1881, by the great Viennese surgeon, Theodor Billroth, to remove a cancer of the stomach, the first such attempt in which the patient survived the operation. We hoped to re-enact this scene with all the accuracy of which careful historical research was capable, although we agreed it was far more important to capture the significance of Billroth's radical attempt rather than reproduce unimportant minutiae. After several months of library research, interviews with physicians who had studied at the Vienna General

Hospital, and numerous letters to Vienna, we felt we knew enough about Billroth, his assistants, his patient, and his armamentarium to proceed with studio photography, except that we wanted to avoid using a studio. Fortunately, the Old Memorial Hospital in New York City contained a Victorian, and now unused, operating theater (built in 1881) which we were allowed to use as a "set." Dr. Norman Lenson, who represented the technical advisors throughout the daily problems of production, checked every surgical detail to make sure that the actors would be completely convincing in their roles.

2.—*Sequences showing the family physician* in the circumstances of his daily practice in which he might ordinarily see patients in whom he suspected malignant neoplasm. We were fortunate in securing the cooperation of the Nassau County Medical Society for these sequences; several members of the Society interrupted busy practices to permit our cameramen to come into their offices to record their examinations of patients. The patients were, of course, actors; it is worth repeating, however, that the physicians seen in the film are men now in practice, and their "performances" lend a reality to certain sequences in the picture which would otherwise be unobtainable.

3.—*Sequences showing the best modern surgery can offer* in selected cases. Here was the field in which, photographically speaking, there is perhaps the most widespread experience in medical film circles, for surgeons and clinical photographers have shot hundreds of thousands of feet of film in operating rooms all over the world. We could only hope, at best, to refine a bit the techniques of those who had preceded us; this we attempted in two ways. First, by using the latest type of commercial Kodachrome 16 mm. film and specially designed lights (with unique heat dissipating frames and spark proof switches) with which we hoped to reproduce tissues in as close to natural color as possible; the finest lenses and cameras were used to give each shot maximum depth of field sharpness, and other more subtle photographic qualities. Our photographers were not only experienced medical cameramen, who knew how to be careful of asepsis and unobtrusive in the operating room, but talented as well. Second, we made a definite attempt to avoid the static quality so often seen in surgical photography, in which the picture opens with the operative field and never changes point of view for hundreds of feet of film. We mounted our camera on a remarkable aluminum rubber wheeled crane, thereby giving us the flexibility to peer at any surgical procedure in a fashion which, when enlarged on the screen at projection time, might rival or surpass the surgeon's own eye viewpoint. Although such camera flexibility had the indirect benefit of improving "eye interest," its major purpose was to show the audience precisely what the narrator was talking about on the sound track from the best possible angle; the prevailing intention in every such shot was pedagogic, not aesthetic. And when, for example, the narrator generalizes about surgical principles, the camera shows a brief general view of the operating room, thereby avoiding bedeviling the eye with some closeup of the operative field which would compete with the information reaching the ear.

4.—*Sequences of medical animation* (often miscalled "diagrams") which could be interwoven with the clinical material photographed in the offices of our cooperating family physicians. The purpose here was to show by straight photography what the examining physician might see (such as a retracted nipple), then, by graphic animation, to enter the body and show why. In the case of a retracted nipple, for example, the animation shows how a lump within the breast has involved the connective tissue. Although we hoped our art work would avoid the extreme and unrealistic appearance of diagrams, we were also careful to avoid the opposite extreme—that of drawing body structures in all the minute detail commonly seen in good medical illustrations. Such detail is excellent in textbooks, over any page of which a student may linger and study; in a film, on the other hand, the educator is wise if he presents one simplified structure, or teaching point, at a time, and then leads the eye-and-ear immediately onward to the next point. In order to keep the screen free of everything but the salient features, our artists would often represent the human body by a lung here, the stomach there, a clavicle perched in space. The eye is left free to follow, for example, the involvement of the supraclavicular nodes by metastasis from a bronchogenic carcinoma—without any distracting drawings of other structures or organs. However odd this may sound in print, the success of this unique attempt can be measured only by viewing the final film.

5.—*Sequences summing up in statistical form,* from the best possible sources, our national experience with the cancer field in the past, and possible future trends. Statistics in many medical films, like illustrations, have unwittingly aped the textbooks which preceded them; such carryovers, like the buttons at the end of a man's coat sleeve, may have whatever benefit there is in custom, but certainly little in utility. Instead of the usual bar charts and customary peak and valley graphs we hoped to present some imaginative pictorial representation of statistics so that the eye could grasp the total meaning swiftly. After many weary weeks and hundreds of sketches, we were able to create graphic designs on the screen which we feel possess two great benefits: simplicity and clarity.

All the material enumerated in the preceding five sections was, as noted previously, first outlined and then extended by a process perhaps analagous to fractional distillation, into a very detailed shooting script. Concurrently with the writing of the script, a storyboard was prepared. This consisted of dozens of pencil sketches in color which showed, shot by shot in schematic form, just what the words in the script were discussing. This not only helped reduce the inevitable discussion about using this word or that, but also forced our production team to think constantly in visual terms which would meet the demands of the technical advisors. The painstaking effort this storyboard required soon proved to be an inexpensive form of insurance; time and again we found blind spots in our cinematic treatment because we could not design the sketches.

After back-tracking and further technical advice we were able to come up with better answers, so that, when the comparatively costly final camera work began, the director and his assistants had only to look at the "blueprint" to see what the technical advisors had approved.

It would be unfair not to record, if only momentarily, the inevitable accidents, the camera which was tipped over, broken, and could be repaired only in California; the liaison difficulties inherent in a joint project involving a dozen people three hundred miles apart, et cetera. . . .

Any medical educator familiar with audiovisual teaching aids might well ask: So much for production, but what about distribution and utilization?

We are painfully aware of the simple fact that the best teaching film in the world would do no good if it collected dust on someone's shelf. For that reason we had planned from the start to make sufficient prints of the first film, and those which will follow it, so that any bona fide professional group could obtain a copy, by loan or by purchase, with a minimum of difficulty or delay. Details of our distribution plans, including addresses of regional film depositories, will appear in the major journals of medicine, medical teaching and hospital administration (see: "How You Can Get the Film—Cancer: A Problem in Early Diagnosis") as well as in interorganization bulletins of the American Cancer Society and the United States Public Health Service.

In some ways the problems of utilization are more complex than those of distribution. We plan to include with each print of the film a utilitarian pamphlet outlining suggestions which experience has shown help make successful screenings; such details as proper acoustics, ventilation, electric current, and the availability of spare parts, such as projector lamps, are stressed. It is the feeling of the sponsoring organizations that there will be a spectrum in the manner of presenting the film, ranging from the group which has assembled to hear a speaker on the subject of cancer, views the film and then holds a brief discussion, to the more formal type of presentation in which the film takes its part in a careful plan employing lectures, demonstrations, lantern slides, Kodachrome transparencies, textbooks, bibliographies, seminar discussions, exhibits, all under the control of an experienced, imaginative medical educator who can handle this range of materials with symphonic precision. In any case, the important point here is that the first film, like those which will follow it, is designed to be used by itself, with or without a lecturer, or to take its part in a broader program.

If the techniques and production ideas represented in "Cancer: The Problem of Early Diagnosis" can help other educators and film makers improve the audiovisual aids they are planning in other fields of medicine, each of us who had a part in its making would consider that an extra dividend. But, for the present, we hope to make some small contribution to the wider understanding of cancer; although we have worked long and hard on this first film of the series we cannot help but feel that we have just begun.

HOW YOU CAN GET THE FILM, "CANCER: A PROBLEM IN EARLY DIAGNOSIS"

THE FILM

Audience: Hospital staffs, medical societies, medical schools, and any gathering of physicians.

Specifications: 16 mm. sound film in color.

Running Time: 30 minutes.

TO BUY:

You can get a print for preview, after February, from

AUDIO PRODUCTIONS, INC.
630 Ninth Avenue, New York 19, N. Y.

After seeing it, send Audio Productions a check for $150 if you wish to keep the print. Otherwise return the film.

TO BORROW:

You can get a print for a single showing from your State Cancer Society, your State Health Department, or the four regional depots of

ASSOCIATION FILMS

347 Madison Avenue New York 17, N. Y.	206 South Michigan Avenue Chicago 3, Illinois
3012 Maple Avenue Dallas 4, Texas	351 Turk Street San Francisco 2, California

Borrowers usually pay shipping costs and there may be a small service charge in addition.

For more information about the film, write to either of the sponsors: American Cancer Society, 47 Beaver Street, New York 4, N. Y., and the National Cancer Institute, United States Public Health Service, Bethesda 14, Md.

A Method of Measuring the Completeness of a Medical Library and an Example of Its Application

R. L. Stehle
Honorary Medical Librarian
and
E. R. Gordon
Medical Librarian
McGill University, Montreal

How big is your library, how many volumes do you have? The answer is usually quite definite. If the question were "How complete is your library?" there could not be a definite answer unless the librarian could say, "We have everything in our line" and none would say that. In the case of specialized libraries if there was any way of determining how many volumes comprised the complete literature of the subject, a librarian might say, on the basis of his library's holdings, that it had, say, 75 per cent of the literature. This would be more illuminating than a figure for the number of volumes. However, it would be very difficult, probably impossible, to determine the number of volumes of books and journals comprising the literature of a subject. This being so, is there really any way to measure the completeness of a library? We think there is in the case of some kinds of libraries.

In medical libraries, and, perhaps, in all libraries of science, it is the periodicals which have permanent value. Most modern scientific books have very limited lives. Time was when the author of a book said something original in it; nowadays, to an extent approaching 100 per cent, books are compilations, often convenient to have for a while, but, nevertheless, containing nothing one could not discover without them. If this be granted, books may be left out of consideration in measuring the completeness of a medical library. The problem is reduced, then, to determining how much of the periodical literature a library has. It may be simplified further by eliminating domestic periodicals, for, certainly, quite a few of our libraries have all those of real value; consequently, they are alike in this respect. Every nation is partial to its own literature and its libraries may be assumed to be more or less uniform with respect to it.

With this simplification of the problem three categories of medical periodicals were selected—general surgery, ophthalmology, and ear, nose and throat. Lists of the journals in these categories were made and then, from the Union List of Serials, in which the periodical holdings of libraries are recorded, the holdings of a number of the larger libraries were obtained. In selecting the journals only those published in English, German, French, Italian, Spanish (within Spain only) were included. A complete survey would, of course, include all medical subjects. Ophthalmology may seem to have been an odd choice. It was selected

	No. Journals	No. Volumes	Lane	Univ. of Cal.	McGill	Yale	Army	Crerar	Northwestern	Univ. of Ill.	Univ. of Chicago	Boston Medical	Harvard	Welch	Univ. of Mich.	Univ. of Minn.	Washington Univ.	King's Co.	Columbia	N. Y. Academy	Duke	Phila. Col. of Phys.	Vanderbilt
EAR, NOSE AND THROAT																							
German	18	682	634	38	284	200	642	563	334	284	562	623	228	472	530	494	530	524	172	649	359	600	242
French	11	321	166	2	107	41	263	174	93	10	97	229	40	32	173	130	130	215	24	307	47	290	58
Italian	12	291	50	.....	8	.....	217	110	.....	.....	18	180	29	.....	58	25	.....	26	1	219	.....	77	.....
Spanish	8	119	.....	.....	.....	.....	85	.....	.....	.....	.....	4	.....	.....	14	.....	.....	9	.....	89	.....	18	.....
English	3	82	68	61	81	60	76	75	68	27	64	65	47	43	68	.....	60	77	60	68	60	78	6
Scandinavian and Japanese	5	83	38	34	12	33	39	34	20	35	33	33	1	32	33	34	.....	35	23	34	.....	23	2
Totals	57	1,583	956	135	492	334	1,322	956	565	356	774	1,134	345	579	876	683	720	886	285	1,386	466	1,086	308
Rank		.....	5	21	14	18	2	5	13	16	9	3	17	12	8	11	10	7	20	1	15	4	19
GENERAL SURGERY																							
German	12	972	931	827	777	925	972	897	814	916	.....	908	647	807	917	953	923	919	808	971	785	963	778
French	15	371	228	214	174	55	350	248	118	185	.....	282	88	101	235	209	217	250	152	329	170	306	204
Italian	8	224	50	19	68	42	224	109	59	.....	.....	185	19	.....	149	146	73	164	.....	213	.....	171	73
English	3	44	39	43	44	26	44	35	26	40	.....	43	26	44	29	24	44	43	41	41	26	44	44
Scandinavian and Japanese	4	117	106	48	45	43	104	98	56	13	.....	94	62	47	97	60	94	100	1	117	51	93	96
Totals	42	1,728	1,353	1,151	1,108	1,091	1,694	1,375	1,073	1,124	.....	1,492	842	999	1,427	1,392	1,351	1,485	1,002	1,671	1,032	1,587	1,195
Rank	.....	.....	9	12	14	15	1	8	16	13	.....	4	20	19	6	7	10	5	18	2	17	3	11
OPHTHALMOLOGY																							
German	15	787	778	334	764	662	787	724	565	380	.....	706	509	673	662	587	719	687	703	786	450	732	274
French	12	521	335	17	468	125	387	352	90	43	.....	320	244	282	311	225	227	318	319	473	68	335	231
Italian	11	233	32	1	109	34	229	74	5	.....	.....	74	20	38	46	4	4	93	28	154	.....	107	.....
Spanish	3	70	3	.....	42	.....	56	.....	.....	.....	.....	37	.....	35	.....	.....	.....	26	26	39	.....	12	.....
English	5	144	140	141	122	92	140	125	64	64	.....	144	140	143	141	126	144	126	144	143	87	144	88
Egyptian, Jewish, Japanese and Scandinavian	6	88	21	19	45	17	41	33	18	19	.....	27	17	26	19	19	39	19	32	42	.....	29	19
Totals	52	1,813	1,309	512	1,550	930	1,640	1,228	722	496	.....	1,308	930	1,202	1,179	961	1,133	1,269	1,262	1,637	605	1,359	587
Rank	.....	.....	5	19	3	14	1	7	16	20	.....	6	15	10	11	13	12	8	9	2	17	4	18

for local reasons. The library from which this communication comes thought it was pretty good in this subject and was curious to know how good, in a quantitative sense. It owes its standing in this field largely to the late Dr. C. A. Wood. That it came off so badly in ear, nose and throat was an unpleasant surprise.

It should be pointed out that the method of survey employed has a weak point. If any library did not do a good job in reporting to the Union List of Serials, it will, of course, not come off as well as it should. However, in our own case, the reporting was well done and there is no reason to suppose that most other libraries did less well.

In the above table no periodicals, current or extinct, were knowingly omitted. The holdings were taken from the Union List of Serials, 1943. Only complete volumes are included. In the case of a few journals, there was uncertainty regarding the number of volumes issued, but even if there are some errors in this respect, the correct figures would not be greatly different. In ophthalmology, the asterisk in the Columbia column indicates that the holdings of the New York Institute of Ophthalmology have been substituted for Columbia. The survey included the holdings of the University of Chicago in ear, nose and throat only. Under "Spanish" only periodicals originating in Spain are included. "English" includes the publications of Great Britain, Australia and New Zealand. "General Surgery" means that gynecological, urological, orthopedic, neurological, thoracic surgery, etc., have been excluded as far as possible, at least journals devoted solely to any of them are not included.

Objectives and Rewards*

ELDRIDGE CAMPBELL
Professor of Surgery, Albany Medical College
Albany, New York

Few, if any, events in a man's life—with the possible exception of his first successful proposal—are as important as his decision to study medicine. You have followed the calling of the greatest of professions, and your apprenticeships are nearing their end. The word greatest is used advisedly, for by combining the charity which comes from the love of our fellow man with the vast lore of scientific knowledge presently available, we can do much to alleviate the suffering of mankind. Your road has been neither easy nor short, nor will it ever be, and your greatest reward will be the knowledge of a job well done, often combined with the gratitude of your patients. Compared with your outlay of time and tuition, your monetary rewards will be modest—and must never be the guiding influence in your careers, for not only will you be bitterly disappointed, but a disgrace to an ancient profession, the fundamental precept of which is charity.

There is probably no science, save possibly physical chemistry, in which the frontier of the known is being pushed faster into the unknown than in medicine. Much of this knowledge has been acquired within the last two or three generations of doctors. Insulin, liver extract, the vitamins and now the antibiotics, to mention but a few, have come since I entered medical college. Equally revolutionary advances were made during the previous generation. My father, for nearly half a century a general practitioner in the mountains of West Virginia, "read medicine" when the teachings of Lister were just reaching this country. At that time the required period of study in Baltimore was two years, the second being largely a repetition of the first! Armed with his new knowledge of antisepsis he first took a *locum tenens* for a Doctor Hunter in the fastness of Bath County, Virginia. In later years, he loved to tell the story of his first operation, the suture of a large axe wound in the leg of a lumberjack. With the generous use of carbolic acid and boiling water he attempted to kill Pasteur's germs, of which he had heard so much but actually seen so little. When he returned a few days later to change the dressing, it chanced to be a Sunday and most of the patient's friends dropped in to witness the results of the young doctor's handiwork. Father said that when he approached the bunk he felt apprehensive, for his patient looked feverish, but when he removed the dressing and a large amount of yellow pus poured out, his heart really sank. An awful silence followed, during which Father said he could feel the cold sweat on his forehead and had visions of leaving the community precipitously, when from the back of the crowd an old mountaineer spoke up, saying, "Ah, that's fine; old Doc Hunter used to say that if a wound wouldn't run, by God he'd make it run!"

*Written for the Graduating Class, Albany Medical College, 1948.

Two of the commonest and most unfortunate misconceptions entertained by the young man in medicine are that almost everything has been learned and that any further advance in our knowledge can come only by the aid of an elaborate and costly outlay of apparatus. Nothing could be further from the truth. James MacKenzie's fundamental contributions to the subject of cardiac arrhythmias were made when he was a busy general practitioner in a remote Lancashire village; von Mering and Minkowski discovered the diabetic role of the pancreas in a laboratory, the equipment of which would now seem hopelessly inadequate and outmoded; while Hughlings Jackson, simply by his powers of observation and of reason, and with no apparatus, was able to postulate not only the position and the organization of the motor cortex, but many of its physiological characteristics as well. The essential requirements for adding to knowledge are an open, inquiring mind, and a willingness to work both hard and late. We doctors are notably prone to accept the teaching of authorities; we believed Hippocrates and Galen for hundreds of years, in many instances in open disregard of the plain and obvious demonstrations of Mother Nature. Doubtless many of today's credos will be negated by tomorrow's discoveries. All about us are huge, unsolved problems, the very challenge of their continued existence being dulled by their familiarity. What is the origin of high blood pressure; of peptic ulcer? What makes a tumor grow? What is the cause of epilepsy, and why, if you say that in one case it is due to a cortical scar, does the patient not have fits constantly? These and a hundred thousand other fascinating problems await your solution.

Not every one has the laboratory bent, but many prefer, and perhaps are best suited for, clinical work; a few will be able to combine the two. In either case, your rewards will be largely proportional to what you put into your work, be it in the laboratory, or on the ward or in the home. The successful practice of medicine entails a knowledge and a love of people as well as a collection of biophysical facts; to attempt it on the basis of science alone is to build a cold and bare scaffold on which your uncomforted patients will hang the tattered remains of your misanthropic reputation. How much greater the satisfaction of him who practices scientific medicine, tinctured with a love for the suffering humanity placed in his care. By way of contrast, I should like to cite an incident in the latter half of the life of that West Virginia country doctor of whom I spoke earlier. One day he was thrown from his horse and sustained a near fatal injury. At the closest hospital, some 30 miles away, he had a stormy time, but I think he was sustained by the fact that almost every man, woman and child in the community came with anxious face to inquire for him, while the negroes held nightly prayer meetings for his recovery. What greater reward could any man have?

General Semantics and the Practice of Medicine*

STUART C. CULLEN
Professor of Surgery, Chairman Division of Anesthesiology,
State University of Iowa College of Medicine
Iowa City, Iowa

General semantics is defined as the study and improvement of human evaluative processes with special emphasis on their relation to signs and symbols including language. Throughout the daily lives of physicians and in the practice of their profession numerous symbols arising out of established language patterns do seriously interfere with the necessary flexibility of daily social contacts and even more importantly with the advancement of special scientific knowledge and with the freedom of approach to the solution of problems in medicine.

The control of our language and its adaptation and alteration to be consonant with changes in our social structure, our philosophies and more pertinently our scientific attitudes, is a function of the people who use the language. That this function is not properly exercised and that contrarily, words, word forms and word phrases obstruct the thinking of many people, is a paradox which seriously impedes the ability of individuals and groups to think and act without undue reference to established practice or custom or precedent.

There is no more classic example of the effects of adherence to unscientific dogma than that sterile period in medicine during which Galen was the high priest. During his life and for centuries thereafter, language habits so dominated thought processes and associated actions that there was widespread blanketing of creative scientific endeavor and only the eclectic and discerning minds of Vesalius, Leonardo da Vinci, Harvey and others had the courage to break with tradition and question the authorities. How many physicians today are Galenical in their teaching and in their practice of medicine? Medical students, as students of science, are constantly exposed to habits of language in texts, lectures, seminars and in everyday conversations with their fellow students and with their teachers. Consciously or unconsciously these students are grooved into channels which restrict freedom of expression, leave little room or time for ruminative or creative thinking and permit a minimum of deviation from the established pattern. At the ends of these channels there are rewards for the conformist, for the student who can best parrot back the phrases, the Galenical elements known as syndromes. Would it not be pertinent for the student who is striving for these rewards or is the recipient of the distinctions accorded them by the apostles of Galen to inquire into the manner by which these standards were attained and whether the methods used in achieving them will serve him well as a continuing man of science?

Orientation in our culture can be accomplished in part, at least, by the application of the principles followed by the general semanticist. General

*Presented at a meeting of Alpha Omega Alpha, University of Nebraska College of Medicine, March 26, 1948.

semantics has to do with the application of scientific method not only to the study and the practice of medicine, but also to the evaluation of daily experiences with family, friends, etc. General semantics provides a means by which we can develop a philosophy of thought and action to cope with the constant changes in our profession as well as our daily lives.

It is in respect to the consciousness of changes that one can begin to obtain an awareness of one useful area of general semantics. From Wendell Johnson's book "People in Quandaries"[1], it might be well to quote a few paragraphs in clarification of the matter of change.

"Change, however all-pervading and rapid, need not be terrifying. It does not terrify the physicist, it fascinates him. And change in the lives of nations, groups, and individuals does not terrify the social scientist; it merely determines the lines of his investigation. Change is terrifying only to those who do not expect it, only to those who, in planning their lives, leave it out of account.

"But in large measure, unfortunately, we have and still are taught to leave it out of account. Change has been suspect and has been resisted throughout the history of the race. It has been customary for fathers to pass on to their sons the creeds and customs which their own fathers passed on to them. Ancestors have been worshipped and the Old Man has been honored from time immemorial. Education has been chiefly a matter of compelling the child to conform to the ways of his elders. The student has been taught answers, not questions. At least, when questions have been taught, the answers have been given the student, but not a method for adding to it or reviewing it—except the method of authority, of going to the book, of asking the Old Man. The chief aim of education has been to make of the child another Old Man, to pour the new wines of possibility into the old bottles of tradition."

Medical students, teachers of medicine and practitioners of medicine might ask themselves the following questions. Are you functioning as a child of the Old Man? Is education to you a matter of going to the book? When presented with a problem in medicine have you developed a method so that if the book and the Old Man do not have the answer, it is still possible to work at the problem? Have your contacts in school, in the hospital, and in your office left you with many questions the answers to which are not in the back of the book? Have these unanswered questions provoked you to evolve a method by which some of them may be answered? To you is one pharmacologic experiment the same as the next one? is one patient with appendicitis the same as the next one? and is the treatment of pneumonia in one patient the same as in the next? Have you learned that one set of signs and symptoms is pathognomonic of one disease in all patients? Have you learned that if that set of signs and symptoms is not complete that it is possible that that disease may still exist in the patient? If in your final compilation of signs, symptoms, and laboratory data on a certain patient, the diagnosis is still not made, are you depressed because it does not fit with the answer in the book or the statements of the Old Man, or are you exhilarated with the prospect of continuing the search for the answer and are you prepared with a scientific method to attempt the solution of the problem?

Do you feel that it is the duty of your teachers to provide you with all the answers and with finite knowledge? Do you want to be satisfied with "established concepts" or are you interested in being imbued with the feeling that the knowledge gained today is "subject to change without notice"? Are you more comfortable when you can "make up your mind" about a patient or a laboratory problem and are you disturbed when it appears that it may be necessary to change your mind?

Throughout medical education students have been taught to believe in the consistency of things. The gastrocnemius muscle originates here and inserts there in all cadavers; atropine does this to all animals or all patients. All patients with brain tumor have elevated intracranial pressure, etc. This process of emphasizing similarities may cause the student to be distracted and annoyed and somewhat lost when the gastrocnemius does not follow the usual pattern; atropine does not produce the expected effect in your patient, or the autopsy reveals a brain tumor in the patient who did not have an elevated intracranial pressure. Perhaps it would be expedient and more productive of satisfactory results if one learned to expect dissimilarities, recognize them, investigate them and use them.

Resistance to change, the adherence to recognition of similarities, the formulation of inflexible generalizations, the retention of dogmatism and the preachings of the Old Man represent the Aristotelian or prescientific civilization. Although this prescientific civilization is still dominant in our world, we are in the process of exchanging it for the civilization of science. The static notions of the old are giving way to the realization of "tendency toward change, a high valuation of differences, a critical attitude toward established generalization, a conviction that traditions are to be outgrown and a profound respect for the authority of systematic observation and evaluated experience—the authority of science as method."[1]

Science, in the language of the general semanticist, refers not to the use of technical apparatus, not to "the sciences" such as biology, physics, etc., not to statements represented many times as "scientific facts," or to theories and laws. Science as a method is a device, the application of which will result in the practice of better medicine, the development of fruitful research, and better relations with and more complete understanding of our fellow men. In the practice of medicine is there any more important element in the success of that practice than the understanding of our patients, our colleagues, and all those with whom we come in contact?

The method of science consists of asking clear questions, making direct, unprejudiced, and thorough observations, using those observations to answer as well as possible the questions asked, and revising or discarding any beliefs or assumptions made prior to the observations, if those beliefs or assumptions are not valid in the light of the new obervations made.

It is well to emphasize that science as a method is not utilized to its fullest extent if the process ceases with the single application of the aforementioned

pattern. It is essential that new questions be asked, new observations made, from which new answers can be derived. Smug satisfaction with one project well done is not conducive to continuing profit to the individual or to our culture.

In the pattern for scientific method one should be aware that the questions should be well-framed. Experiments cannot be planned, observations are not apt to be pertinent, and the answers are likely to be unreliable and meaningless if the questions are not clearly stated. An example of a question not clearly stated is one you often hear asked. Will socialized medicine result in a poorer grade of patient care? A question such as this put to a general semanticist immediately prompts him to inquire, "What do you mean? What do you mean when you ask 'will'? Do you mean in the next ten years or the next thousand? What do you mean by 'socialized' "?

There is no more perfect example of an ambiguous symbol in language than the phrase "socialized medicine." What does it mean? Bolshevism? Leninism? Marxism? or is it possible that it could be something like the AAA program in which many farmers are now participating?

It is possible also that "socialized medicine" could be that type of medicine that is practiced to the benefit of patients and to the science of medicine in general in Sweden and in medical schools, particularly those supported by state funds which have staffs which are "socialized" according to certain standards. Private schools are encountering or participating in a rather distinct trend toward distribution of available sources of income along lines which is some quarters are considered "socialistic."

This is not meant to be a discourse on "socialized medicine" nor is there advocation of the sort of practice of medicine that many people believe will be associated with their interpretation of the term "socialized medicine," but the semanticist would strongly urge that the red flag that obscures our vision when the symbol is uttered be removed so that a scientific approach to the problem can be made.

The semanticist would continue to ask, "What do you mean by 'medicine'? Do you mean the diagnosis of disease, the treatment of it, and if so by whom? What do you mean by 'poorer grade'? What standard are you using and what reference is there for that standard? What do you mean by 'patient care' "? And so on.

It becomes apparent that the question posed is not an answerable question. The answer to it will most certainly be meaningless unless the words within the question are used with reference to their adaptability to reliable and specific observations and deductions. A question such as the following might be more amenable to answer.

In the next five years, will men and women with the degree of Doctor of Medicine, who are employed by the Federal Government on a salary, cure by contemporary standards, more or less, patients with pulmonary tuberculosis than men and women with the degree of Doctor of Medicine who are not employed

by the Federal Government? This seems like a more complicated question, but it delineates the problem more clearly and is more adaptable to solution.

Another significant feature of general semantics is its treatment of projection. Projection is an unavoidable aspect of one's evaluation of any stimulus or situation. To put it simply, when one says, "The sky is blue," he is making a statement that is only in part about the sky; in part it is a statement about him, about the way his nervous system works in response to stimulation by light waves with particular characteristics. He is projecting his personal evaluation of the sky into the sky. His statement, "The sky is blue," would therefore be more accurate if it were changed to, "The sky, as I perceive and interpret it, appears blue," or more simply, "The sky looks blue to me." We cannot avoid projecting our personal perceptions and interpretations onto what we call external reality. What is crucial, therefore, is that we be highly conscious of projection, constantly aware of the degree to which the statements we make are about the things we are presumably talking about, and the degree to which they are about us, our personal habits of perception and evaluation.

Conscious projection is an awareness on the part of the individual that statements he makes or observations he makes are a result of his own conscious or unconscious interpretations. When an individual says, "This is a fine day," he is not usually reporting solely on the weather. He means that he had a good night's sleep; he had no fight with his wife at breakfast; the youngsters seemed more angelic than usual and were ready for school on time; he likes sunshine, and many other personal influences. The scientist is careful to point out in reporting a certain experiment that the data were obtained under specific conditions, with certain equipment, and were interpreted according to specific conditions. The semanticist and the scientist are saying that "to me this is a fine day" and "to me the results of this experiment seem to indicate such and such." Projection of this nature clarifies to the listener the source of the observation or the statement but more importantly it leaves the maker of the observation or the statement with the perception that his own statement or observation is the result of many factors that are subject to change as the evidence warrants it.

This is the sort of an attitude that the medical student can well afford to cultivate. In his approach to a problem in medicine, whether it be the diagnosis of a difficult case or the solution of a biochemical investigation, the student would unconsciously work at the problem to satisfy his own interests and to answer his own questions. When the diagnosis of the case or the results of the biochemical investigation are presented to his teacher, they are presented as the result of his personal observations and scientific deductions and not as memorized answers from the book. In other words "to him" the answer seems to be as presented. If the answer does not coincide with what the teacher considers to be correct or with what is in "the book," the teacher can more profitably investigate the method by which the answer was obtained and work at improving it rather than simply provide the "correct" answer. It may be that the answer as given by "the book" or the teacher is not right.

This is the sort of attitude that the practitioner of medicine can use to advantage in his evaluation of his patients. If he has asked questions, made reliable observations, and altered beliefs and assumptions made from these observations after new data are available, he is less likely to be reluctant to seek consultation and enter into profitable discussion concerning his practice. "To him," according to the methods he has applied, there is evidence to support his interpretations; and he becomes unconsciously aware that to others other observations and interpretations may result. Differences of opinion "automatically" become impersonal and stimulating.

One of the standbys of prescientific culture is ventriloquizing. It is the practice of speaking or writing or even thinking as if with the voice or the pen or the mind of another. The eminent ventriloquizers of our time are the judge, the preacher, the parent and the teacher. The judge commonly speaks as if he were the LAW, the preacher as if he were the DIVINE BEING, the parent as if he knew all the answers, and the teacher as if he were the VOICE OF WISDOM.

How many teachers have presented dogma as if they were the unquestionable authority? Is it not time for you and for all of us to begin to ask these ventriloquizers, "What do you mean"? and "How do you know"? It is perfectly acceptable to listen to what the teachers have to present, in fact, it is imperative to the relatively speedy advancement of learning that one listens attentively. However, at the termination of the listening, it is time to start asking questions and to find methods of answering those questions.

Another significant feature of scientific practice is that of prediction. Prediction is important for two reasons. It enables us to gain a certain measure of control over the processes of nature and our own personal and social development. Furthermore, it provides the basis for evaluation. That is, a theory or policy is good only insofar as it enables us to predict with reasonable accuracy, and thus prepare effectively for coming events. This ability to predict is sometimes referred to as foresight and makes up a good share of what is ofttimes referred to as intelligence. Predictions are reliable when based upon scientific endeavor; that is, the preparation of good questions, the recording of observations, the making of conclusions from accurate data, and the constant testing and revision of general conclusions.

The material presented represents but a small fraction of the whole field of general semantics. It has had to do chiefly with the presentation of some of the general principles of semantics and the manner in which they can be applied by medical students, teachers and practitioners. In these principles there are useful features that will help them in their daily associations with their fellow men, in their daily work with their colleagues, and in their endeavors to advance the art and the science of medicine.

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An Analysis of Factors Influencing Student Success or Failure in the Medical School*

A. W. HURD
Director Bureau of Educational Research and Service
Medical College of Virginia
Richmond, Virginia

Fifty-eight articles appearing in the Journal of the Association of American Medical Colleges between January, 1927, and May, 1948, were examined and an annotated bibliography prepared for this analysis. Most of these articles were based on collected data from one or many medical schools. All of them bear upon the factors of student success or failure in medical courses, and emphasize the problems of student selection, instruction, and personality characteristics related to success or failure. The diversity of opinion represented in the various statements is great, and serves to indicate the many ramifications needing further investigation, if failures are to be reduced in number, and student progress is to be facilitated. This analysis represents an attempt to list the many suggested factors, so as to identify them more clearly, and carry on added investigations to give further clarification to the large and important problem. It is our hope that experimentation in the direction of suggested remedies may eventually supply evidence of the effectiveness of changes recommended by implication in the items listed.

In the first listing, one hundred twenty-seven items were listed as suggestions, some with considerable frequency of mention. In general, it was evident that they might be collected around problems of (1) previous preparation, (2) plans and procedures of instruction, including personnel and training, (3) personality characteristics and problems of students, and (4) reliability and validity of evaluation of success or failure. These will emerge as the analysis proceeds.

Statistics show, in general, that about one-fifth of entering students fail to graduate from medical schools. The larger number fail during the first two years, but there are continuing failures during the last two years. About one-fifth of the graduates never practice medicine. The following table lists the factors as suggested with the frequency of mention by the various writers of the articles.

TABLE 1.—FACTORS CONDITIONING SUCCESS OR FAILURE OF MEDICAL STUDENTS.

Those Particularly Related to Previous Preparation.	Frequency of Mention
1. Premedical grades predictive	7
2. Premedical grades not predictive	5
3. High scholarship in all fields most predictive	4
4. More premedical work makes for better medical work	3
5. More premedical work does not make for better medical work	3
6. Advantages for local college students	2
7. Some poor college students good medical students	1
8. Good men often eliminated	2
9. Medical school should control premedical work	2
10. Medical education different in kind than premedical education	2

*As suggested in articles published in the Journal of the Association of American Medical Colleges during the last twenty years.

		Frequency of Mention
11.	Use first year as try out	1
12.	No use in passing responsibility to lower schools	1
13.	Previous preparation important	1
14.	Need more non-science preparation	8
15.	A. B. degree better than B. S. degree	1
16.	Some data show accredited colleges not superior for preparation	1
17.	Greater amount of pre-science work not significant	1
18.	Laboratory grades most predictive of medical grades	1
19.	Students more successful in later medical school years	1
20.	Extra laboratory work in zoology gives higher medical grades	1
21.	Need more careful selection	2
	Those Particularly Related to Instruction in the Medical School.	
22.	Need more real teaching ability in instructors	4
23.	Teach fundamental principles—not too much detail	4
24.	Need better definitions of aims or goals	6
25.	Too much memorization and storing of facts instead of use	2
26.	Need better rapport between students and instructors	2
27.	Medical schools vary greatly in quality of achievement	2
28.	Teachers should study students	2
29.	Need enthusiastic instructors	2
30.	Need more individuality in our medical schools	1
31.	HOW students study more important than WHAT	1
32.	Major cause of student failure does not rest with student	1
33.	Need more analysis of the nature of learning	1
34.	Failure due to too little study	3
35.	Failure due to wrong study habits, e. g. memorization	1
36.	Failure due to wrong attitude toward subject and examinations	1
37.	Need longer medical course	1
38.	Failure due to deficiencies in knowledge in some fields	1
39.	Poor scholarship in medical subjects the cause of failure	2
40.	Teach student to think is important	1
41.	Outside coaching helps	1
42.	Teacher should know subject well	1
43.	Teacher's function to guide	1
44.	Need correlation between medical courses	1
45.	Instructor should see student's problems	1
46.	Need prompt instructors	1
47.	Make general practitioners	1
48.	Insight important—not only experience	1
49.	Too much dependence upon books	1
50.	Eliminate foreign language requirement	1
51.	More physics	1
52.	School should accept more responsibility for fate of students	1
53.	Too much antagonism between students and instructors	1
54.	Student should be an economic part of medical institution	1
55.	Students not interested in mere lesson getting	1
56.	Students treat required work as unnecessary drudgery	1
57.	Poor direction by teachers	2
	Those Particularly Related to Student Characteristics	
58.	Mental pattern more predictive than mere scholarship	3
59.	Character related to medical success	2
60.	Honesty important	2
61.	Mental ability or intelligence important	2
62.	Strong personality important	2
63.	Ill health and nervous disorders common	6
64.	Youngest best in first year medical work	2
65.	Age at entrance not apparently important	1
66.	Studiousness, as a trait, predictive	1
67.	Feelings, attitudes, sentiments of prospective doctors important	1
68.	Doctor born—not made	1
69.	Sense of opportunity important	1
70.	High ideals important	1
71.	Physical ability important	1
72.	Leadership ability important	1
73.	Non-admittance sometimes stimulates to future success	1
74.	A second trial often fruitful	1
75.	Need more attention to mental cultivation of students	1
76.	Mental habits more important than knowledge alone	1
77.	Failure due to lack of intellectual curiosity	1
78.	First year mainly a matter of adjustment	1
79.	Emotional adaptation more important than mental ability	1
80.	Financial problems upsetting	2
81.	Outside work undesirable	2
82.	Outside interests sometimes take over	1
83.	Supporting families an obstacle	1
84.	Too little sleep	1
85.	Underfeeding	1
86.	Innate ability or aptitude important	1
87.	Lack of energy a cause of failure	1
88.	Lack of logical thinking ability a factor	1
89.	Social adaptability important	1
90.	Hard workers more successful	1
91.	Near relatives physicians helpful	1
92.	Women as successful as men	1
93.	Student self-activity important	1

		Frequency of Mention
94.	Problem of physical adjustment important	1
95.	Voluntary withdrawals from medical school considerable	1
96.	Domestic infelicities a factor	1
97.	Lack of ability seldom a cause of failure	1
98.	Personality disturbances important	1
99.	Need more mental hygiene treatment	2
100.	Personality very important—use of knowledge	2
101.	Good personality important	8
	Those Particularly Related to Appraisal and Evaluation.	
102.	Need better analysis of specific abilities and personal characteristics	4
103.	Comprehensive examinations a matter of great import	5
104.	Need better measures of achievement for better prediction	3
105.	Need more objective-type examinations	2
106.	Reliability of present examinations low	1
107.	Aptitude tests for the particular school superior	1
108.	Grade papers without knowing the name of the student	1
109.	College measuring rods like medical schools'	1
110.	Interest measures, of themselves, relatively unimportant	1
111.	Aptitude test probably a better predictor of first year's work	1
112.	Science items in entrance test better than non-science	2
113.	Very low aptitude scores—low medical scores	1
114.	Impossible to completely and accurately predict	1
115.	Need for better combinations of criteria to predict success	3
116.	Need for other measures to predict success	1
117.	Personal interview prediction not very reliable	1
118.	Need better criteria of success in medicine	1
119.	Need better criteria of success in medical practice	1
120.	Selection without aptitude test faulty	1
121.	Aptitude test scores not predictive in some schools	4
122.	Aptitude test scores quite predictive in many schools	3
123.	Aptitude and premedical grades most predictive	3
124.	Some parts of aptitude test more predictive	1

These one hundred twenty-four statements representing a frequency of mention of more than 200 should help to give direction to further efforts to identify them more specifically in cases of student success or failure; and particularly in the efforts to prevent so many failures and bring about more valid selection, and elimination of failure in much greater degree. To be sure, there are many differing reasons given for failure which show that many assign entirely different causes. Some blame previous schooling, some put the blame on deficiencies in the medical school itself; some place the blame on the students entirely; some emphasize better measuring instruments—aptitude and achievement. All the diverging opinions cannot possibly be right, but all may represent possibilities in individual cases. The task of assigning responsibility in each case of failure is no easy one, and no single, inclusive reason may logically be assigned for all failures. Chances are that, if adequate study is given to each of the major responsibilities suggested above, viz. previous schooling, medical instruction, student responsibility, and better evaluation devices, more definite steps may be taken to improve the situation in all of its aspects.

Experimentation is mandatory from many different angles. Various remedies must be tried and proved of value or disproved. Mere theorizing without experimentation can scarcely be expected to establish a firm foundation of logical explanation and remediation.

Uniform Intern Placement Plan for 1949

As Approved by the Association of American Medical Colleges in Executive Session November 9, 1948

This plan will apply only to undergraduate students in the fourth year of their medical school course.

1. APPLICATION FOR INTERNSHIP.

(a) Shall be made the third Tuesday of October (October 18th in 1949) or shortly thereafter.

(b) To be made in duplicate; the original to go to the Dean of the applicant's medical school for transmission to the hospital along with credentials; the second copy to go directly to the hospital for its information.
(The American Hospital Association with the assistance of representatives of the medical services of the U. S. Army, U. S. Navy, U. S. Public Health Service and U. S. Veterans' Administration, was assigned the task of preparing a standard application form.)

(c) May or may not be accompanied by letters of recommendation from faculty members, but no such letters shall be routinely requested by the hospital.

(d) Shall not be limited in number.

2. PROFFERING OF INTERNSHIP APPOINTMENTS.

(a) To be made by hospital by telegram to arrive in hands of applicant not before 12:01 a.m. on the third Tuesday of November. (November 15th in 1949.) (Applicants may visit hospitals and be interviewed by hospital intern committees but the hospital administration shall not commit the hospital before the third Tuesday of November.)

(b) To be made to alternates under the same conditions as set forth in 2 (a).

3. ACCEPTANCE OF PROFFERED APPOINTMENTS.

(a) Shall be made promptly but no hospital may require that the applicant file his acceptance before 12:00 noon of the day of the proffering of the appointment, the third Tuesday of November.
(The applicant should be given time to receive notice of all appointments being proffered him before he is required to file his acceptance of any one appointment.)

(b) Shall be followed promptly by proper notification of withdrawal of application to all other hospitals who have proffered appointments.

RECOMMENDATIONS MADE BY THE ASSOCIATION IN EXECUTIVE SESSION

1. That the Association, in cooperation with all national bodies concerned with intern and residency education give consideration to the establishment of one single accrediting agency for hospital internships and residencies.

2. That the Association record its belief that any plan for allocating interns equally among approved hospitals on the basis of yearly admissions would not be in the best interests of either hospitals or interns.

3. That the foregoing Uniform Intern Placement Plan and accompanying recommendations be submitted promptly to the Council on Medical Education and Hospitals of the American Medical Association, the American Hospital Association, the Catholic Hospital Association, and the American Protestant Hospital Association for consideration and approval.

4. That when properly approved by interested national organizations this plan and these recommendations be widely publicized for the guidance of all concerned.

Talk Given by Brigadier General G. E. Armstrong, Deputy Surgeon General, Before Association of American Medical Colleges, at White Sulphur Springs, West Virginia, November 8-10, 1948

One year ago, I asked permission to tell you of some of the troubles we were faced with, and this morning I appear before you, at the suggestion of your Executive Council, to pin-point one of our many current problems. I should like to say before going further, that my knowledge of medical education has been greatly increased in the past two years. I have learned a great deal.

To pin-point one thing, my conception of deans has changed in a very marked degree. I can remember when I thought that a dean was one of the most powerful individuals in the country; that he had the power of life and death, almost, over his students; that he ruled his faculty with an iron hand, and that he had unlimited funds either from private endowment or from some kind state legislature.

Today, I realize that all of those things are not completely true, and, furthermore, I have learned that medical deans have their troubles, too, and that has tended to dwarf in my mind some of my own.

Two years ago, partly through your kindness, there came to Washington, at their own invitation, a group of individuals who said, "We would like to help you study your problems." Many of you are familiar with that original advisory group which came to us at the termination of hostilities:—Dr. Churchill, Dr. Morgan, Dr. Menninger, Dr. Pincoffs and Dr. DeBakey—and, after making a thorough study, they came up with several suggestions, but the one thing that they emphasized most strongly was that above all in the military establishment of medical service, "You need professional leadership."

They drew up a five point legislative program, things which we could not do within our own shop, and that five point program went before the Congress, and the individuals whom I have just mentioned came before the Senate and the House committees to stress their program. Two of the points in that program were passed by the Congress, and one is pertinent to my remarks, in that it gave us the authority to take into the armed services medical departments individuals of any age, if they met the qualifications demanded for professional leadership.

In the Army (and in the Army I include the Medical Department which is serving most of the Departments of the Army and Department of the Air Force) we have taken in from many, many applications, 40 individuals in the higher grades. Of that 40, 10 qualify as fine teachers. However, that is a far cry from our needs.

Knowing that this would not alone solve our problem, we did, as you know, institute certain postgraduate training programs which, to date, have gone along quite to our satisfaction. There are individuals here today who can tell you in some detail their opinions regarding that program. The impact of the program, however, upon our medical service throughout the world will not be felt for another eighteen months to two years.

During this interim period, the professional talents of a high grade, particularly those with teaching ability, are being concentrated in those institutions where we are training clinical specialists. Therefore, in our overseas areas, particularly, there is a terrific dearth of professional leadership. As a means of implementing this problem, I mentioned last year our plans to send teams of consultants overseas, and, as a matter of fact, it was in December of last year that the first team went to the European theater. In thinking back, I remember that two members of the team were Walter

Martin and George Finney. Since then, there have been teams going to the European theater each month, and, beginning in March, there have been teams going to the Far East Command, and several teams have gone to the Caribbean area.

Those individuals are going out at monthly intervals and spending two or three days in the month in each of our overseas hospitals. They have done a wonderful job of stimulating the young men and manning those institutions. The value of those teams cannot be overemphasized. Each team has consisted of one internist, one general surgeon and one neuropsychiatrist, and to that team have been added, from time to time, men from the other clinical specialties.

Recently I talked with individuals coming back from these consultant trips, and it was only the day before coming here that we had a long talk with Dr. William F. Porter of Richmond. He, and men like David Barr and Cecil Watson, while they recognize the value of this monthly visit, all stress the fact that it is not enough. For example, to show you the dearth of this professional leadership, in the European theater alone, there is not one single ophthalmologist. I mention that merely as an example. There also is a dearth in all the other clinical specialties.

I should like to say here that these consultants returning from their trips have been most complimentary to the work being done by these young men whom you have been turning out. Many of them are the product of an accelerated program, and a few of them have been deferred for nine months, some for eighteen months, of residency training. Those individuals with that limited amount of training have gone into the hospitals, taken over the services and the sections, and done it without any help from the top, other than these occasional visits. Why we have not had more "explosions" is a compliment to you.

This matter has been taken up with our advisory group recently, and with the Council on National Emergency Medical Service of the American Medical Association. It was their suggestion that we take this matter up with you at this meeting. I have in mind addressing a letter to you personally in a few weeks, but, in the meantime, we would appreciate it very much if you would be giving thought to whether or not you have on your faculty clinical specialists whom you could spare on sabbatical leave for six months or preferably for one year, to go particularly to the overseas areas to help us out during this critical interim period.

Certain advantages will accrue to those individuals. There are even civilian contacts in the Far East, although, perhaps, not in the same amount and quality as is encountered in Europe, but, surely, in the old days, when we thought the acme of preparation for teaching or becoming a top flight clinical specialist was going abroad, sometimes at terrific personal expense, today, I grant, the need for that contact is by no means what it was in our younger days, but there still is a certain amount of value in visiting the clinics abroad.

If you find such individuals whom you can spare, who have the interest—I do not want to wave the flag and say "Patriotism," although I happen to know there are still such individuals—who would care to contact our office personally, we will then tell that individual where he is going, what he is going to do, how he will travel, whether he will have quarters, whether he can take his family, or any particular thing, so that there will be no question in that individual's mind about any of those points which I have just mentioned. If the picture of his living conditions where we would like to have him go are not good, we will be frank. Korea is not a pretty place, other than from the professional point of view.

I would be remiss if I did not take this opportunity of telling you how much we appreciate our contact with this organization. Fred Zapffe, particularly, has been mighty swell to us.

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Survey of Medical Education

The Council on Medical Education and Hospitals of the American Medical Association and the Association of American Medical Colleges will sponsor a joint survey of medical education, beginning January 1, 1949.

Members of the committee of seven appointed to conduct the survey and publish a report of its findings are: Dr. Alan Valentine, chairman, president, University of Rochester; Dr. Arthur C. Bachmeyer, associate dean, University of Chicago School of Medicine; Dr. Herman G. Weiskotten, dean, Syracuse University College of Medicine; Dr. Joseph C. Hinsey, dean, Cornell University Medical College; Dr. Victor Johnson, director, Mayo Foundation for Medical Education and Research; Dr. Dean F. Smiley, secretary, Association of American Medical Colleges; Dr. Donald G. Anderson, secretary, Council on Medical Education and Hospitals, American Medical Association.

The committee has appointed Dr. John E. Deitrick, New York, to be the full time director of the survey. Doctor Deitrick is a graduate of Johns Hopkins University School of Medicine. He is associate professor of medicine at the Cornell University Medical College, and medical director and director of postgraduate instruction of the Second (Cornell) Medical Division, Bellevue Hospital, New York City. He has been active for many years in research in cardiovascular disease and has reported the results of his studies in a number of papers in leading scientific journals.

The survey will extend over a period of three years.

The committee stated that the objectives of the study are to evaluate the present programs and determine the future responsibilities of medical education in its broadest aspects for the purpose of:

1. Improving medical education to better meet the overall needs of the American people for the prevention of disease, the restoration as far as possible to health of all those who have suffered ill health or injury, and for the maintenance of the best standards of physical and mental health of all the people.

2. Assessing the degree to which schools are meeting the needs of the country for physicians.

3. Promoting the advancement of knowledge in the field of medical science.

4. Better informing the public concerning the nature, content, and purposes of medical education.

It is expected that the report of the new survey, which will begin in 1949, will result in important and far reaching changes in medical education.

* *

The Intern Shortage

The intern shortage is becoming more acute year after year. Many hospitals which provide excellent opportunities for the intern find that they not only cannot secure interns but graduates do not even apply for these positions. These hospitals claim that larger hospitals and hospitals which have a teaching affiliation with a medical school or which are owned by the university of which the medical school is a part absorb such a large number of the graduates that none remain for hospitals not in this class. It must be remembered that ordinarily, in normal times when there is not acceleration of academic years, only about 5,200 students are graduated. With some ac-

celeration still in force this number is stepped up to about 5,800. But there are approximately 8,000 approved internships. Then, too, there are two year internships, which reduces the number of internships available every year somewhat.

Then there enters another factor, the internships offered by the Army, the Navy and the U. S. Public Health Service. These internships offer special inducements, particularly financial, thus making them more attractive than what an intern receives from a civilian hospital. The Surgeon General of the Army reports that his service has received 741 applications for an internship beginning July 1, 1949. Fifty-eight schools were represented. All but 71 of the applicants were physically qualified. Of the 230 who accepted appointments, 119 were in the upper third of their class, 107 in the middle third and 4 in the lower third. The U. S. Public Health Service received 600 applications and appointed 121 interns for duty in 11 marine hospitals.

Some hospitals have been forced to employ house officers—former interns or young practitioners who wished to have further intern training. Even graduates of foreign medical schools have accepted house officer positions. Of course, it has often been said that some hospitals seeking interns are not entitled to such service, nevertheless these hospitals do seek interns. Many other complaints have been made by hospitals. It has been suggested by hospitals that some plan be devised which would place the approval of hospitals for internships in the hands of one agency. It is felt that it would unsnarl some of the tangles. That some plan be devised which would set up a quota system for all hospitals —because it is charged that many hospitals take on many more interns than their services actually require. And so on, ad infinitum. It does seem that there are many irritating factors connected with the whole intern problem—not only those dealing with securing interns, methods of appointment but also from the educational point of view. The burning question is: Does the intern receive an education the equal of a university education or is he merely a sort of "glorified orderly." Much needs to be done—and soon—to clarify this whole situation.

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Federal Aid for Psychiatry Training

Grants totaling $1,498,333 have been awarded by the Federal Security Agency to 42 medical schools for the purpose of bolstering the teaching of psychiatry to undergraduate students. Allotments, which are mostly in the $37,000 range, will be divided over a three year period. First installments will be made in July, 1949. It is the first time Federal money has been allocated to strengthen psychiatric instruction to undergraduates. Up to the present, $4,519,031 has been obligated for grants to states for mental health services; $2,601,333 for training grants and stipends at postgraduate level and $894,148 for research grants and fellowships.

◆ ◆

The Borden Award

At the forty-ninth annual meeting of the Association of American Medical Colleges, the Borden Award was bestowed on Dr. George N. Papanicolaou, professor of anatomy, Cornell University Medical College, for his work on the early diagnosis of cancer by means of smear preparations. The 1948 award was bestowed on Dr. Vincent DuVigneaud, professor of biochemistry, Cornell University Medical College, for his work on penicillin.

Nominations for the 1949 award are now in order. Any member of the faculty of a member medical college may make a nomination. Five copies of each nomination should be forwarded to the Secretary of the Association, together with five sets of reprints bearing on the investigation for which the nomination is made. Nominations should be based on work published during the preceding five years by members of the faculties of the medical schools in the United States and Canada which are members of the Association. The nominations

should contain the academic and scientific history of the candidates and a reasoned statement of the basis of the nomination. Nominations must be completed and in the hands of the committee before March 1, 1949.

The personnel of the committee is as follows: James B. McNaught, chairman, University of Colorado; Charles H. Best, University of Toronto; Brian Blades, George Washington University; John B. Youmans, University of Illinois; Edward S. Best, University of Oregon.

It is hoped that the interest taken in this subject will be as great as it has been in the two preceding years. This is an outstanding opportunity to do honor to someone who has worked long and faithfully on a scientific research in any field of medicine and ancillary sciences.

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The Production and Use of Medical Visual Aids

Two articles of the current issue clearly show that certain sensible and practical moves are being made to solve the complex problems of production and utilization in medical visual aids. In the article, "A Method for the Curriculum Integration of Audiovisual Aids in Preventive Medicine and Public Health," are listed the six major tasks which confront the teacher groups seriously interested in medical film production. The article, "A New Approach to Medical Films," on the management of the cancer film series shows the kind and quality of coherent film planning implicit in tasks III and IV of the former article. The cancer series further demonstrates the admirable willingness of its production team to face both the difficulties of distribution and the challenges of good usage; these are the factors implicit in task VI.

Out of the welter of more or less aimless and incomplete programs, out of the erratic and largely planless medical film production of the past 40 years there seems to be emerging a more general recognition that visual aids will come to be acceptable and accepted only if they are fitted into the context of the teaching courses. In preventive medicine a total course seems to be under methodical attack. In cancer a single series of basic films appears to be under the most systematic production management. In the former the medical student is the target; in the latter the general practitioner is the target; in both a clearcut audience and teaching situation has been concretely considered and the visual units tailored accordingly. Both programs are promising milestones. Other specialty fields are developing essentially similar programs. And such pilot ventures will be watched with great interest by all those interested in the advancement of medical education through the newer tools now available.

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Frauds

Word has been received from the University of Chicago that Sheldon Selikoff, of Yonkers, N. Y., and Eric Saks, of Chicago, have made use of fraudulent credentials. They were students at the University of Chicago. Their work was not good, although the credentials now submitted by them indicate that they were good students. Admission committees of all medical schools are cautioned to be on the outlook for these two men.

College News

University of Illinois
College of Medicine

Three research grants in the amount of $16,869 have been awarded to the college. The U. S. Public Health Service has renewed a grant of $6,580 for continuance of studies on cardiac output. The studies are being conducted by the department of physiology, under the supervision of Dr. R. C. Ingraham. U. S. P. H. S. also has awarded a grant of $2,943 for a research project on facial growth after removal of the mandibular condyle. The study will be conducted by the College of Dentistry, under the supervision of Dr. Barnard G. Sarnat. Eli Lilly and Company has awarded a $5,346 grant to the college for research on mumps vaccination. The project will be conducted under the joint direction of Dr. J. E. Kempf and Dr. Ralph Spaeth.

Dr. H. Worley Kendell has been appointed expert civilian consultant to the U. S. Surgeon General for a medical mission to the Pacific Area. The purpose of the mission is to further promote and improve the quality of medical care in Army medical installations. Consultants participating in the mission will assist and advise theater surgeons and the hospital staffs in the treatment of patients. The participants will conduct clinics, make ward rounds, give lectures, and perform other teaching functions that may be required. Doctor Kendell is professor and head of the department of physical medicine.

Renewal of a yearly grant in the amount of $2,000 has been made by Smith, Kline and French for the support of research on the effects of amines in experimental renal and other hypertensions. The research will be conducted in the department of physiology by E. A. Ohler, under the supervision of Dr. G. E. Wakerlin, head of the department.

Dr. A. C. Ivy and Dr. John B. Youmans received recognition for their services during the war. Doctor Ivy received the President's Certificate of Merit. Doctor Youmans received the Army-Navy Certificate of Merit.

Five research grants totaling $22,462 have been received. The U. S. Navy has awarded a grant of $10,800 for continued research in the prophylaxis and treatment of experimental hypertension. The study will be conducted by the department of physiology, under the supervision of Dr. C. E. Wakerlin. A grant of $4,882 has been awarded by the American Society of Heating and Ventilating Engineers for studies in physiological adjustments of human beings to rapid changes in environment. The project will be conducted by the department of medicine under the supervision of Dr. Robert W. Keeton. A $3,780 grant has been received from the U. S. Public Health Service for a research project on cephalometric x-ray study of the growth of the human head from the 8th to the 15th year. It will be conducted by the College of Dentistry, under the supervision of Dr. Allan G. Brodie.

The Illinois Federation of Women's Clubs has awarded $2,000 to Dr. Danely P. Slaughter of the Tumor Clinic for a fellowship in cancer. The American Medical Association has awarded a $1,000 grant for studies on pancreatic function to be conducted in the department of surgery, under the supervision of Dr. Warren H. Cole.

Appointment of Drs. Lewis Haas, Nathan O. Kaplan, Arthur A. Rodriquez and Audrey Wilson to the faculty of the college with the rank of assistant professor has been announced. Doctor Haas, recently appointed professor of radiology, served as head of the x-ray department of the Koranyi City Hospital in Budapest, Hungary, from 1945 to 1948. Doctor Kaplan has been appointed assistant professor in the department of biological chemistry. Doctor Rodriquez has been appointed assistant professor of

physical medicine. His first duties were to take charge of a research program in electrical stimulation of muscles in poliomyelitis patients with a new variable frequency wave generator. The program was sponsored by the National Foundation for Infantile Paralysis, and was undertaken under the direction of Drs. A. C. Ivy and H. Worley Kendell. Doctor Wilson has rejoined the faculty as an assistant professor of radiology, following a year of residence in Phoenix, Ariz.

Dr. G. A. Bennett has been named expert civilian consultant to the U. S. Surgeon General for a medical mission to the Canal Zone. Doctor Bennett, head of the department of pathology, will instruct military personnel, and will observe procedures used in hospitals in that area.

Dr. Max C. Igloe, head of the Chicago Health Department's new District Health Center, has been appointed as an associate professor in the department of preventive medicine and public health on 16 per cent time.

Sir Archibald McIndoe, chief of plastic surgery for the R. A. F. during the war, gave a lecture on "Total Reconstruction of the Face Following Burns" November 10.

Five members of the faculty of the college retired September 1, having reached retirement age: Dr. Selim W. McArthur, clinical professor of surgery; Dr. Clifford G. Grulee, Rush, clinical professor of pediatrics and former head of the department at Presbyterian Hospital; Dr. James H. Mitchell, Rush, clinical professor of dermatology and former head of the department of dermatology and syphilology at Presbyterian Hospital; Dr. Daniel B. Hayden, clinical professor of otolaryngology (Rush) and former head of the department at Presbyterian Hospital, and Dr. Morris Braude, clinical associate professor of psychiatry (Rush).

Ten research fellowships will be awarded for one year in the fields of medicine, dentistry and pharmacy. The fellowships carry stipends of $1,800 per year for medical graduates with exemption from tuition fees for all appointees. Registration in the Graduate College for credit toward M.S. or Ph.D. degrees is required.

Appointments cover a calendar year with a one month vacation. Fellows are eligible for reappointment in competition with the new applicants. Candidates must have completed a minimum training in work leading to the B.S. or B.A. and M.D. degrees. Candidates should indicate the fields of research in which they are interested and submit transcripts of their scholastic credits, together with the names of three former science teachers as references. Appointments will be announced March 1, 1949, or shortly thereafter. The fellowship year begins on July 1, 1949, or September 1, 1949.

Formal application blanks may be secured from the Secretary of the Graduate Committee, 1853 W. Polk Street, Chicago 12, Illinois.

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University of Colorado
Medical Center

At the meeting of the Board of Regents of the University of Colorado held on October 22, 1948, the following administrative changes were authorized. These changes are in line with a rather drastic administrative reorganization which will place the Medical Center of the University of Colorado in a position to coordinate all of its health teaching and service activities and also place it in a position to take on regional educational and service responsibilities.

Dr. Ward Darley will continue as director of the Medical Center, but, in addition, will carry the title "Executive Dean of Health Sciences and Services." He has resigned as dean of the School of Medicine and his place, as of November 1, 1948, will be taken by Dr. Robert C. Lewis, professor of biochemistry. Doctor Lewis's appointment is that of acting dean. Dr. Robert Liggett will continue as assistant dean of the School of Medicine. Dr. George A. W. Currie, who was graduated from Queen's University and holds a degree in hospital administration from Columbia Univer-

sity, has been appointed as administrator of hospitals.

Colorado announces the establishment of a department of biophysics at the Medical Center. A graduate program leading to the Ph.D. degree in biophysics will be offered. Courses of instruction include training in the use of radioactive isotopes in biology, the interactions of ionizing radiations with living systems, study of the behavior of biologically important macromolecules, and biostatistics. The department will also take part in the Atomic Energy Commission's program for postdoctoral training in biophysics. A research program centering about cellular growth processes, and study of the radiation chemistry of artificially induced mutations is now being set up. Dr. Theodore Puck, formerly of the departments of medicine and biochemistry of the University of Chicago, has been named professor and head of the department.

Establishment of a sanitarian training center, the only one of its kind in the Rocky Mountain region, at the Medical Center is announced by cooperating agencies sponsoring the program. The training center, designed chiefly to aid in overcoming a great shortage of trained personnel in sanitation is a cooperative effort of the U. S. Public Health Service local district, the Colorado state health department, the city of Denver, and the medical school. Trainees from Colorado, Wyoming, Utah and Montana will be given a three month course of intensive study, which will include lectures, discussion, demonstration, and field experience. Qualified young men and women will be selected by public health agencies in these states to participate in the program. Although classes will be held to a maximum of twelve trainees in order to provide individual instruction, trainees from other states will be accepted if possible, Dr. Lloyd J. Florio, professor of public health and preventive medicine at the medical school said.

An extension of the Communicable Disease Center of the U. S. Public Health Service in Atlanta, Ga., the sanitarian training center will be headed by Clyde F. Herring, sanitation engineer with the U. S. Public Health Service. The staff will include four full time members, and part time instruction will be given by personnel of the state and city departments of health. Doctor Florio and Dr. Horace Dodge, assistant professor of public health and preventive medicine at the medical school, will also instruct classes.

The training center will occupy space in the temporary barracks at the medical center, which are at present being altered to accommodate equipment. Under the cooperative setup, the U. S. Public Health Service is supplying personnel for the training, equipment and material; the University Medical School supplies space, service and part time personnel; and the city and state health departments will supply training personnel.

Officials said that they expect to offer the first three month course late this winter, and will continue the courses consecutively throughout the year.

Various places in Colorado will be used for field experience in restaurant and water sanitation and other phases of the program.

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George Washington University School of Medicine

An Aniseikonic Clinic has been established at the new George Washington University Hospital. The clinic makes use of a new space eikonometer. Patients are accepted for examination in the Aniseikonic Clinic through the Eye Department of the hospital. Dr. Ernest A. W. Sheppard, professor of ophthalmology, is head of the department.

Dr. John McMichael, professor of medicine at the University of London and medical pioneer in the diagnosis of different types of heart failure, delivered the William C. Borden lecture November 15. Doctor McMichael's address, "Some Peripheral Vascular Reactions of Surgical Interest," will revive the Borden lectures which were discontinued during the war. These lectures on vari-

ous phases of surgery are delivered annually for university students and for members of the Washington medical profession. The lectures are made possible by a fund established by the Borden family in memory of the late Dr. William C. Borden, formerly dean of the School of Medicine.

A joint program of clinical cancer research has been announced. Dr. Roy Hertz, assistant professor of medicine and chairman of the Endocrinology Section NCI, has been named chairman of a committee to develop and direct the new program. Other members of the committee, consisting of school staff members, include Drs. Brian Blades, professor of surgery; Thomas M. Brown, professor of medicine; Calvin T. Klopp, director of Cancer Service at George Washington Hospital; Paul K. Smith, professor of pharmacology; Thomas M. Peery, professor of pathology; and J. Keith Cromer, consultant gynecologist. The new cooperative program is financed from the university's cancer research funds, which come from grants made by the National Cancer Institute, the American Cancer Society and private sources.

Checks for two grants for cancer research were received. The checks represent gifts of $45,000 which the District and American Cancer Societies gave. Research is to be done by the Warwick Memorial Clinic, which is affiliated with the George Washington University. Mr. Eliot Wadsworth, vice president of the District of Columbia Division of the American Cancer Society, will present a check for $20,000, the largest single grant ever made by the District Division. Mr. Douglas Poteat, executive vice president of the American Cancer Society, will come from New York national headquarters to present a check of $12,500, first payment on a grant of $25,000. Both grants are for the fiscal year beginning September of this year.

Funds will be used to provide facilities for all projects now being carried on at the clinic. These facilities will include hiring of a synthetic chemist for a radioactive tracer laboratory under the direction of Dr. Paul K. Smith, professor of pharmacology; the hiring of a tissue culture technician for the screening of chemicals as regards their action on malignant cells; supplies and equipment; and the maintenance of four beds in the George Washington University Hospital for cancer cases under study. This brings to eight the number of such beds now being maintained at the hospital. The other four are being supported as part of a cooperative venture between the university and the National Institute of Health.

Research projects now being carried out at the Warwick Clinic are: study of metabolism of hormones in cancer patients; metabolic defects in patients with gastrointestinal cancer; metabolic changes accompanying treatment of certain lymphoid tumors; and evaluation of use of hormones and hormone antagonists in treatment of certain types of cancer.

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University of Wisconsin Medical School

The Medical School, through its division of graduate medical education, will present an intensive five day course in gastroenterology starting February 14, and continuing through February 18, 1949. The course will be practical and will be under the direct supervision of Dr. K. L. Puestow and Dr. F. L. Weston with the assistance of other members of the medical staff. The course content will include proctoscopic and gastroscopic demonstrations with discussion of techniques, parasitic diseases of the intestinal tract, food poisoning, toxemias, malignant disease of the tract, x-ray and surgical aspects of therapy, jaundice and its causes, along with other disorders of function and physiology. Enrollment in this course will be limited to twelve physicians and applications may be made to Dr. Llewellyn R. Cole, the Medical School, 418 North Randall, Madison 6.

The University of Wisconsin Medical Society sponsored a public lecture by Dr. Clinton N. Woolsey, newly appointed Charles Sumner Slichter Re-

search professor of neurophysiology at the Medical School. This lecture, held December 7, concerned the subject of "Newer Studies on the Localization of Function in the Brain." The Charles Sumner Slichter Research Professorship was recently established by the Wisconsin Alumni Research Foundation as a memorial to the late Charles Sumner Slichter, long time dean of the Graduate School and professor of mathematics at the University of Wisconsin. Doctor Woolsey came to the State University in Madison from Johns Hopkins Medical School in Baltimore, where he served as professor of physiology.

The third annual Arthur S. Leevenhart memorial lecture was given by Dr. Elliott P. Joslin of Boston. The subject was, "Observations on Diabetes Mellitus."

The annual two day scientific meeting of the extramural teaching group of preceptors of the Medical School took place in Madison on November 19 and 20, and physicians from the sixteen preceptor groups throughout the State of Wisconsin attended. Each senior medical student spends twelve weeks of the fourth year of his training in one of the preceptor groups.

Dr. H. C. Hou, director of the Institute of Nutrition in Nanking, China, spoke November 17 on "Certain Nutritional Deficiency Disease Problems in China." Doctor Hou is a medical graduate of Peking University and has done graduate work at McGill University, holding the degree of Master of Medical Science and Physiology at that institution. At the present time he is working in the Biochemistry Department of the University of Wisconsin before he returns to his country.

The Medical School will make use of the frequency modulation facilities of the University of Wisconsin radio station, WHA, in presenting from time to time conferences, symposia, and medical lectures focused primarily for the medical practitioner of Wisconsin. Arrangements are being made with Station WHA in Madison for the use of a one or possibly two hour night period for broadcast of this type of scientific program. County medical societies will be contacted and local arrangements will be made for frequency modulation reception. FM eliminates static and fading and assures even and constant reception of radio signals. This is the first time that scientific medical material has been broadcast by a medical school through a state owned university radio station. The first program will probably be given in February, 1949, and it will concern the human back. Subsequent programs are being planned to include thoracic diseases, newer therapeutic methods and similar topics.

A Medical School Convocation was held January 12. The speaker was Dr. Oscar G. Moland, a medical graduate of the school in 1935, and now practicing medicine in Augusta, Wisconsin. His subject will be, "From the Viewpoint of a Country Physician."

Dr. William D. Stovall, director of the State Laboratory of Hygiene and professor of hygiene, with his staff, presented the first program of the new year January 4. The subject was "Cytological Diagnosis of Cancer, Using the Smear Method of Papanicolaou." Doctor Stovall is well known for his work in the field of cancer and he has been prominent in the American Cancer Society and has served as president of the Wisconsin Division of the American Cancer group. This meeting will be open to the general public and will be of particular interest to those who are interested in the Papanicolaou Smear Method of cancer detection.

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Duke University
School of Medicine

A month's course in medical mycology under the direction of Dr. Norman F. Conant, is to be offered at Duke during July, 1949. The course will be offered every day in the week, except Sunday, and has been designed to insure a working knowledge of the human pathogenic fungi within the time allotted. Emphasis will be placed on the practical aspects of the laboratory as an aid in

helping establish a diagnosis of fungus infection. Insofar as possible, and as patients become available, methods of collecting materials in the clinic for study and culture will be stressed. Work with patients, clinical material, cultures and laboratory animals will serve as a basis for this course. Also, an opportunity to study pathologic material, gross and microscopic, will be given those whose previous training would allow them to obtain the greatest benefit from a study of such material.

The number of applicants for the course will be limited and the applications will be considered in the order in which they are received. An attempt will be made, however, to select students on the basis of their previous training and their stated need for this type of work.

A fee of $50 will be charged for this course, on the completion of which a suitable certificate will be awarded. Direct inquiries to Dr. Norman F. Conant, Duke University School of Medicine, Durham, N. C.

Plans have been completed for a new four story addition to Duke's medical research building. Estimated cost of the wing is $120,000, including services and equipment. The cost is being borne by sources other than university funds. This new space for research work will enable the medical school and hospital to expand their research program, financed largely through outside grants. Such grants are available for a variety of research work, but at the present time there is a severe shortage of space for such work. Additional space will be provided for research projects in the departments of medicine, surgery, physiology and physiological chemistry.

On July 1, 1949, there will be available several two year fellowships at Duke. The stipends will be $2,400 the first year, and $3,000 the second year. The work, which will be under the direct supervision of a senior staff man, will include the following: (1) Special training in the subspecialty chosen. (2) Clinical and consultation practice with ambulatory and hospitalized patients, both public and private. (3) Teaching of third and fourth year medical students on the wards and in the clinics. (4) Clinical and laboratory research. Only those who have completed three years of training in internal medicine, or a satisfactory equivalent, will be eligible for these positions, which have been designed to prepare the candidate for the practice of internal medicine. The following places will be available: (1) Hematology and allergy; (2) Pulmonary diseases; (3) Gastro-enterology; (4) Hypertensive cardiovascular and renal diseases; (5) Metabolic diseases; (6) Cardiology; (7) General internal medicine and therapeutics.

Anyone interested should write to Dr. Eugene A. Stead, Jr., Professor of Medicine, Duke University School of Medicine, Durham, North Carolina.

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Columbia University College of Physicians and Surgeons

Dr. Llewellyn E. Kling has been appointed associate professor of public health education and head of the Public Health Education Division in Columbia University's School of Public Health. Doctor Kling will have charge of the Public Health Education Program which is being supported by a grant from the Commonwealth Fund. The program includes special courses given to all graduate students who are working for master's and doctor's degrees in public health. A full year's course in public health education, including three months of field practice and training, is also given to those persons specializing in the field.

Dr. Granville W. Larimore, head of New York State's Division of Health Education, and Sophie P. Williams, executive secretary of the Washington Heights-Riverside District Health Committee of the New York Tuberculosis and Health Association, are cooperating in the health education program and have made the facilities of their organizations available to Columbia. An extensive program of related courses at Teachers College of Columbia Univer-

sity is also available to the public health education group.

A $2,000,000 cancer research unit consisting of three floors will be constructed atop the present Vanderbilt Clinic. The National Advisory Cancer Council will contribute one-half the amount, Columbia University the other half.

The Francis Delafield Hospital, a new cancer hospital, is now being erected by the City of New York at the Medical Center on property provided by Columbia and the Presbyterian Hospital. This new unit will cost about $7,000,000 and will be completed in 1949. It will accommodate between 300 and 350 patients, and will include, in addition to facilities for deep therapy, radium therapy, chemotherapy and ancillary services, three floors of laboratories to house pathology, biochemistry and bacteriology divisions for routine hospital services. By agreement with the city, Columbia will provide the professional staff.

In addition, Columbia is active in the development of the Brookhaven project, and is completing construction of the world's most powerful cyclotron at Nevis, Irvington-on-Hudson. This will insure for the medical investigators adequate and convenient consultations on a wide variety of fissionable materials which have significance in studies of growth and malignancy.

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New York University
College of Medicine

Dr. Samuel A. Brown, dean emeritus of the college, has been appointed chairman of the Board of Trustees of the New York University-Bellevue Medical Center. Doctor Brown replaces Richard W. Lawrence, whose death occurred recently.

Dr. Ralph Waldo Gerard, professor of physiology, University of Chicago Medical School, spoke on "Physiology and Psychiatry" in the annual Monas S. Gregory Lecture sponsored by the college November 8.

The signing of the formal agreement for the union of the New York Postgraduate Medical School and Hospital with the New York University-Bellevue Medical Center is announced. Simultaneously, New York University announced the formation of a new postgraduate school to be known as the Post-Graduate Medical School of the New York University-Bellevue Medical Center. The new school, which has already begun operation, has its own dean, faculty and program of studies. Through this move the Medical Center will have two medical schools, the other being the New York University College of Medicine, which will be exclusively devoted to the training of medical students for their M.D. degrees. The enlarged program of postgraduate medical education at the Medical Center has been undertaken after careful study of the needs in the field and with the initial support of the Samuel H. Krass Foundation. Appointed acting dean of the Post-Graduate Medical School of the New York University-Bellevue Medical Center is Dr. Robert Boggs. Doctor Boggs has also been serving as acting dean of the New York Post-Graduate Medical School. Appointed as associate deans of the new school are Dr. Clarence E. de la Chapelle, formerly associate dean of the College of Medicine, and Dr. C. Travers Stepita, of the faculty of Post-Graduate.

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Cornell University
Medical College

The Legion of Merit was presented to Dr. Russel H. Patterson, associate professor of clinical surgery, for exceptionally meritorious service in World War II. Dr. Chandler Foote, professor of surgical pathology, became emeritus professor, also Dr. James A. Harrar, professor of clinical obstetrics and gynecology. Dr. John M. Pearce was appointed professor of pathology; Lt. Col. Richard Fraser, professor of military medicine; Dr. Rulon W. Lawson, associate professor of medicine; Dr. Thomas P. Almy, James Ewing associate professor of neoplastic diseases. Dr. Dayton Edwards, for many years assist-

ant dean, was promoted to associate dean; Dr. Harold G. Wolff to professor of medicine (neurology); Dr. Milton J. E. Senn, professor of pediatrics in psychiatry; Dr. Arthur Plamer, professor of clinical surgery (otolaryngology); Dr. Bronson S. Ray, professor of clinical surgery; Dr. R. Gordon Douglas, professor of clinical obstetrics and gynecology and acting head of the department.

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University of Texas
Medical Branch

Dr. M. J. D. White of University College, London, recently appointed professor of zoology at the University of Texas, gave a special series of seminars on endopolyploid conditions in cells. These seminars were conducted under the auspices of the Department of Anatomy and the Tissue Culture Laboratory.

Dr. Edward Chamberlain, professor of radiology at Temple University Medical School, Philadelphia, gave the annual Phi Chi Lecture December 1st. Doctor Chamberlain discussed his observations on medical practices in Poland and Finland, in which countries he has recently surveyed medical education and conditions.

John G. Sinclair, Ph.D., professor of anatomy and former president of the Texas Academy of Science, has organized a Conservation Council under the auspices of the Texas Academy of Science for the purpose of considering ways and means whereby the natural resources of Texas may be preserved. Special attention will be given to the development of human resources. A committee has been appointed to survey the coordination of efforts in the Texas area toward the conservation of health and the prevention of disease.

Dr. Francis C. Grant, professor of neurosurgery, University of Pennsylvania Medical School, Philadelphia, gave the James Greenwood Lecture in neurology and neurosurgery December 6th.

W. W. Nowinski, Ph.D., who has been conducting research on enzyme factors in brain metabolism in the Tissue Culture Laboratory during the past year, has been appointed associate professor of neurochemistry in the department of neurology and psychiatry. A special laboratory has been provided for Doctor Nowinski's studies.

Dr. Marshal Brucer has been appointed director of the Cancer Research Program of the Oak Ridge Institute of Nuclear Studies. Facilities are being established for a long range program to be developed by Doctor Brucer for the study and treatment of malignant diseases. Special laboratories and a hospital with a capacity of thirty patients are being provided. Doctor Brucer received his M.D. from the University of Chicago and was associated with the Airborne Test Board. Doctor Brucer joined the Medical School as assistant professor of physiology. Doctor Brucer will retain connection with the Medical School as visiting professor of physiology.

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University of Rochester
School of Medicine

Promotions: Dr. Jacob D. Goldstein, to associate professor of medicine and bacteriology; Dr. Charles Boller, to associate professor of medicine; Dr. Shirley Snow, Jr., to associate professor of obstetrics and gynecology; Dr. Herman E. Pearse, to professor of surgery; Drs. Plimpton Guptill, Earle Mahoney and Samuel Stabins, to associate professor of surgery; Dr. John Shilling, to assistant professor of surgery and surgical anatomy; Dr. Edward P. Offitt, Jr., to assistant professor of bacteriology and parasitology. Dr. George Packer Berry, associate dean and professor of bacteriology, has assumed the directorship of the Rochester Health Bureau Laboratories. Dr. Robert M. Allen, formerly assistant professor of bacteriology at the University of Nebraska, has joined the staff as assistant professor of bacteriology. Dr. Victor M. Emmel has been appointed assistant professor of medicine.

Yale University
School of Medicine

Dr. Hilda H. Kroeger, of Tucson, Arizona, has been appointed assistant director to Dr. Albert W. Snoke, director of the Grace-New Haven Community Hospital and professor of hospital administration at Yale University.

A vast source of medical reference material—formerly limited to Yale medical students and faculty—is now available to local and state physicians through the recent creation of an organization known as the Associates of the Yale Medical Library. The new group has as its objectives "The maintenance and augmentation of the medical collections, both current and historical; and the extension of the usefulness of these collections, not only to Yale, but to the community at large," according to Dr. Herbert Thoms, professor of obstetrics and gynecology at Yale and chairman of the Associates. More than 160 physicians have become Associates since the group's inception two months ago. The Associates are granted borrowing privileges of the library and will receive its bulletins, including accession lists and notices of important meetings. To expand further the facilities and services of the library, the Associates are required to pay a small annual subscription fee and are urged to contribute books and other pertinent materials.

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University of California
Medical School

Dr. Francis S. Smyth, dean, has just returned from a tour of Japan and the Pacific islands as a consultant to the U. S. Army Surgeon General. While his primary purpose was to give lectures to the staffs of service hospitals, Doctor Smyth also had a good look at the occupation program being undertaken by General MacArthur for the improvement of Japanese medical practice and public health.

Dr. William P. Longmire, Jr., associate professor of surgery, Johns Hopkins University School of Medicine, Baltimore, has been appointed professor of surgery in the Medical School.

December 9, Colonel James P. Cooney, Medical Corps, United States Army, spoke to the members of the faculty, resident staff and senior class. His subject was, "Medical Aspects of Atomic Warfare."

November 19, Brigadier General Crawford F. Sams, chief of the Public Health and Welfare Section of General MacArthur's headquarters in Tokyo, spoke to the members of the faculty, resident staff and junior and senior classes, at the Medical School. His talk concerned his work in Japan.

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Woman's Medical College

Gifts: A new bronze plaque, gift of Dr. Catharine Macfarlane, which lists the names of donors in 1930 who gave $500 or more toward the construction of the present college buildings. Four volumes of the famous medical work: Pernkoff's Topographical Anatomy, gift of Dr. Andreas Plenk, chief surgeon, General Hospital, Linz, Upper Austria. A new flag of the Commonwealth of Pennsylvania, gift of the Philadelphia Boosters' Association. A grant of $37,302 under the National Mental Health Act for developing psychiatric training for undergraduate medical students. The funds will be made available for the school year 1949-50, and will be paid in annual allotments over a three year period. A grant for one year from the Helene Fuld Health Foundation for a Nurse Director of Student Health.

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University of Virginia
Department of Medicine

Dr. E. P. Lehman, head of the department of surgery, attended the Pan Pacific Surgical Congress held in Honolulu. Dr. C. L. Gemmill, department of pharmacology, attended the Ninth International Congress on Industrial Medicine in London, England, from September 12th to 17th. Dr. Eugene R. Kellersberger of the American Mission to

Lepers, Inc., spoke to the faculty and student body October 8th on the subject, "Leprosy." Doctor Kellersberger was one of the five official representatives of the United States Government to the World Leprosy Conference in Havana, Cuba.

Ciba Pharmaceutical Products, Inc., has renewed its grant for $2,500 for continued experiments in bacterial allergy in 1949.

Dr. Edward Tuohy, professor of anesthesia of the School of Medicine of Georgetown University, lectured to the student body and faculty on the subject, "What Anesthesiology Embraces." This lecture was presented on October 25th as one in a series of lectures in the Postgraduate Program for House Officers.

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University of Maryland
School of Medicine

October 18, Dr. Charles Herbert Best, who with Sir Frederick G. Banting discovered insulin in 1921, was a speaker in the department of pharmacology, at the unveiling of a portrait of Prof. John J. Abel. Dr. Paul D. Lamson, long associated with Profesor Abel, now professor of pharmacology at Vanderbilt University, spoke on his personal relationship to Professor Abel. Dr. John C. Krantz, Jr., professor of pharmacology, stated that this was the third painting Dr. H. A. B. Dunning has given to his department, and each painting represented special lines of research in which his department has engaged over the last 15 years, namely, anesthesia, digitalis and heart disease and carbohydrate metabolism.

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Bowman Gray School of Medicine

Thomas A. Will, senior, of New Baltimore, Pa., was elected president and Dr. David Cayer, assistant professor of internal medicine, was elected secretary of the Beta Chapter of Alpha Omega Alpha, honor medical society, following installation of the chapter November 19. Initiates included 6 seniors, 15 alumni, and 9 faculty members. Dr. Walter L. Bierring of Des Moines, Iowa, national AOA president, conferred the charter, and Dr. Wilburt C. Davison, dean, Duke University Medical School, delivered the principal address.

Dr. Virgil H. Moon, professor emeritus of pathology, Jefferson Medical College, has been appointed visiting professor of pathology.

Dr. Howard H. Bradshaw, professor of surgery, has been elected a member of the board of governors of the American College of Surgeons for a term expiring in 1951.

Dr. C. C. Carpenter, dean, was elected vice president of the Association of American Medical Colleges at the annual meeting held at White Sulphur Springs.

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Temple University
School of Medicine

Dr. Wilbur Clyde Thomas has been appointed associate professor of pathology. He graduated from Wake Forest College with a B.S. degree in 1935 and in medicine from the University of Maryland, class of 1939. Doctor Thomas was assistant professor of pathology at the Bowman Gray School of Medicine of Wake Forest College.

The Chevalier Jackson postgraduate course in bronchoesophogology is now in session with students from South America and Canada as well as from numerous States of the Union.

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Northwestern University
Medical School

Dr. Giuseppe Moruzzi, Italian neurophysiologist, has been appointed to Northwestern University Medical School for a year of research by the Rockefeller Foundation, which last year established an annual visiting professorship in the university's Institute of Neurology. Doctor Moruzzi is director of the Institute of Human Physiology at the University of Parma, Italy, and professor of physiology in its medical school. He will devote most of his research to

the physiology of the brain and the functional relation of the cerebellum to the cerebral cortex.

Northwestern has established a research unit for allergy studies in the new allergy research laboratory under the general direction of Dr. Samuel Feinberg, chief of the division of allergy. Laboratory research is being directed by Dr. Saul Malkiel, newly appointed assistant professor of medicine at Northwestern. Initial support of the allergy research laboratory was implemented by grants from the U. S. Public Health Service and several pharmaceutical manufacturers.

Dr. John Bigler has been named acting chairman of the department of pediatrics, replacing Dr. Stanley Gibson, retired.

New Appointments: Dr. Paul Andrew Campbell, assistant professor of otolaryngology; Dr. Anna Hamann, assistant professor of radiology; and Dr. Robert Shrek, assistant professor of pathology.

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Chicago Medical School

On December 10, the Board of Trustees, the faculty, students and guests joined at a dinner-dance in honor of Dean John J. Sheinin for the successful culmination of his efforts, extending over many years, made in an endeavor to secure approval of the school by the Council on Medical Education and Hospitals of the American Medical Association and election to membership in the Association of American Medical Colleges. This recognition was given at the forty-ninth annual meeting of the Association of American Medical Colleges, held in White Sulphur Springs, West Virginia, November 8-10, 1948.

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Medical College of Virginia

To meet the need for more physicians, the Board of Visitors of the Medical College of Virginia (Richmond) have appointed a committee to study the possibility of increasing the number of students permitted to enter the School of Medicine of the college. This year only 84 students could be selected from 550 completed applications for admission. The current enrollment in the four classes of the School of Medicine of the college is 326. Gifts totaling $58,002.91 were received during November. Topping the list were two from the Navy Department, Office of Naval Research, one for $13,370 and the other for $19,668.

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University of Cincinnati
College of Medicine

The Society of General Physicians of Cincinnati established a fund in 1947 for the purpose of making small funds available for the benefit of the College of Medicine. The fund is made up of 75 per cent of net proceeds of the postgraduate program of the society. In the past year the following disbursements were made by the dean, who administers the fund: $1,200 for a teaching fellow in the department of obstetrics, $400 for a precision balance for the gastric laboratory and $1,200 to the cardiac laboratory.

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Stanford University
School of Medicine

Dr. Monroe Jerome Hirsch has been appointed acting assistant professor of physiology. He was formerly assistant professor of physiology at Ohio State University and before that a research associate at Stanford. Jo Ellen Purtle, since 1944 assistant director of the Stanford Nursing Service, is the new educational director of the School of Nursing. Clara Sue Manson has been appointed librarian of the Lane Medical Library. Since 1942, Miss Manson has been assistant librarian of the College of Physicians of Philadelphia.

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University of Southern California
School of Medicine

Dr. M. Paul Starr, clinical professor of medicine of the graduate division of the University of Southern California School of Medicine, Los Angeles, has been appointed professor and acting chairman of the department of medicine.

Tulane University of Louisiana
School of Medicine

Tulane will annually sponsor a series of lectures in honor of the late Dr. John H. Musser, who served for more than twenty years as professor of medicine. The first lecture was held November 12, when Dr. John McMichael of the Postgraduate Medical School of London, England, spoke on "The Principle of Venous Pressure Reduction in the Treatment of Congestive Heart Failure." The university plans to hold lectures twice a year, bringing to New Orleans international figures in medical science.

Dr. Wm. W. Frye has been appointed director of the division of graduate medicine, succeeding Dr. Hiram W. Kostmayer, and assistant dean of the medical school. Former professor and head of the department of preventive medicine at Vanderbilt University, Doctor Frye was appointed to the medical faculty at Tulane in June of this year as professor of tropical medicine and public health and assistant director of the graduate medical division.

A grant of $47,452 has been received from the American Cancer Society to expand the specialized care and study of selected patients regardless of their ability to pay.

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Ohio State University
College of Medicine

Jorgen M. Birkeland, Ph.D., professor of bacteriology and a member of the department staff since 1935, was recently made chairman of the department, succeeding William A. Starin, Ph.D., who retired as emeritus professor of bacteriology.

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Wayne University
College of Medicine

The Detroit Institute for Cancer Research has been formally affiliated with the Wayne University College of Medicine, Detroit. Under the plan, appointments to the scientific staff of the institute will be made on recommendation of its scientific director when such recommendations bear the endorsement of the university faculty. The dean of the college will be a member of the executive committee of the board of trustees of the institute, and the scientific director of the institute will be a member of the administrative committee of the college.

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Baylor University
College of Medicine

The department of pharmacology obtained the following grants for the current academic year: Bilhuber-Knoll Corporation, $2,250. For studying cardiovascular effects of some aliphatic amines. Lakeside Laboratories, $500, plus equipment valued at $1,500. For studying the fundamental mechanisms involved in mercurial diuresis. The United States Public Service grant of $8,650. For the purpose of studying kidney function.

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Louisiana State University
School of Medicine

Dr. Vernon W. Lippard, dean since September, 1946, of the Louisiana State University School of Medicine, New Orleans, has accepted the deanship of the University of Virginia Department of Medicine.

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St. Louis University
School of Medicine

Dr. Robert H. K. Foster was named professor of pharmacology and director of the department during July of this year, replacing Dr. John Auer, who died April 30, 1948. The Reverend Edward T. Foote, S. J., is assistant dean.

The Reverend Alphonse M. Schwitalla, who has been dean since 1927, has resigned because of ill health. His successor has not been appointed.

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University of Utah
School of Medicine

Dr. Edwin A. Lawrence has been named professor of surgery (oncology), and director of the cancer teaching program. Doctor Lawrence was formerly director of the Tumor Clinic at Yale.

General News

Chicago Medical School

The American Medical Association and the Association of American Medical Colleges granted full approval to the Chicago Medical School on November 9, 1948. This action applies to all students now enrolled in the regular four year course at the school. Established in 1912, Chicago Medical School was created from the merger of the Chicago Hospital College of Medicine and Jenner Medical School. It is chartered by the state of Illinois as a university on a non-profit basis and is affiliated with Mount Sinai Hospital and other hospitals in Chicago. John J. Sheinin, who was graduated from Northwestern University Medical School in 1932, is dean of the school, which has a staff of 250 and nearly 300 students. Other approved medical schools in Chicago are those of the University of Chicago, Northwestern University, and the University of Illinois, and the Stritch School of Medicine of Loyola University.

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VETERANS ADMINISTRATION
WASHINGTON, D. C.

The President, Association of
American Medical Colleges
5 S. Wabash Ave., Chicago, Ill.
Dear Sir:

I wish to take advantage of the annual meeting of the Association of American Medical Colleges to express my appreciation to the deans and the faculties of those schools of medicine who have cooperated with the Veterans Administration in enabling them to develop hospitals with outstanding teaching programs.

You have not received public acknowledgment of the many hours of planning and teaching that have made the program a success. The Deans' Committees which have been established by the various deans have spent time, energy and enthusiasm which I greatly appreciate. Their advice and suggestions have been invaluable.

I realize that this arrangement must continue to be of mutual advantage to both you and the Veterans Administration. This advantage will be more evident when our hospitals are built in close vicinity to medical schools, in accordance with plans of the Chief Medical Director and myself. I realize also the time that has been consumed and the sacrifice that has been made when hospitals are a considerable distance from your schools, causing your staff to use time which is unnecessary and which will be avoided with our new hospitals. It is expected that within a few years we will have new hospitals constructed in the communities where your medical schools are placed.

I am taking the liberty at this time of asking you to assist me with Deans' Committees in these new hospitals. It is only by integrating our hospitals with your excellent medical centers that we can expect to develop the best of hospital care for veterans.

Sincerely yours,
(Signed) Carl R. Gray, Jr.
Administrator.

Carl R. Gray, Jr., Administrator
Veterans Administration
Washington, D. C.
Dear Mr. Gray:

Your letter of November 26th arrived after the meeting of the Association of American Medical Colleges which was held at White Sulphur Springs November 8th, 9th and 10th. I am sorry therefore that it was not possible to present it to the membership. However, I am sending it to the Editor of the Journal and asking that he have it printed in the next issue. May I take this opportunity to thank you on behalf of the Association for the thoughts expressed in the message.

With kind personal regards, I am,
Sincerely yours,
J. Roscoe Miller, M.D.,
President.

Book News

Refraction of the Eye

By Alfred Cowan, M.D., Professor of Ophthalmology, Graduate School of Medicine, University of Pennsylvania. Ed. 3. Lea & Febiger, Philadelphia. 1948. Price, $5.50.

This book expands on Sherrington's conception of the functioning of the nervous system in the field of higher nervous activity on the basis of the enormous experimental material collected by the Pavlov School during forty years of research work.

The author approaches the subject with a full realization of its importance and difficulties. Each section is discussed first from the theoretical point of view so that the clinical aspect follows logically. The chapters on practical refraction, both subjective and objective, are fully detailed and devote much more space to the check tests than is found in most texts on the subject. The information on telescopic spectacles and contact lenses is very complete and there is much useful information on the subject of bifocals. A unique feature of the work is the space given to optical theory. Elementary applied physics and simple mathematics are included, especially in those chapters which deal with plane and spheric surfaces. The method followed throughout is based on detailed experiment, example and frequent repetition.

An unusually practical feature of this book is the inclusion of what amounts to a complete laboratory course on ophthalmic optics in its treatment, theory and practice.

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The Clinical Apprentice: A Guide for Students of Medicine

By John M. Naish, M.D., lately Tutor in Medicine, Bristol University, and John Apley, M.D., lately Registrar, Bristol Children's Hospital. The Williams & Wilkins Co., Baltimore. 1948. Price, $4.50.

This book has been written expressly for students receiving their clinical training in medicine. It is divided into two sections: 1. Examination of the Patient at Leisure; 2. Examination of Acute Cases. The book contains much material that should be helpful to every clinical clerk.

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Textbook of Anatomy and Physiology

By Diana Clifford Kimber and Carolyn E. Gray. Revised by Caroline E. Stackpole and Lutis C. Leavell of Teachers College, Columbia University faculty. Ed. 12. The Macmillan Company, New York. 1948. Price, $4.

A special text for nurses.

Education for Professional Responsibility

A Report of the Proceedings of the Inter-Professions Conference on Education for Professional Responsibility held at Buck Hills Falls, Pennsylvania, April 12, 13 and 14, 1948. Carnegie Press, Pittsburgh. 1948.

This report covers a three day session which was presided over by Mr. Elliott Dunlap Smith, Provost, Professor of Social Relations, Carnegie Institute of Technology. The general heads under which the discussions are grouped are: (1) The Objectives of Professional Education; (2) Content and Method of Professional Education; (3) Social and Humanistic Aspects of Professional Education. Some of the papers read covered particular problems of medical education such as "The Clinical Training of the Medical Student," by James H. Means; "A Social Worker Looks at Medical Education," by Eleanor R. Cockrill; "The Physician As a Comprehensive Human Biologist," by John Romano.

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Elementary Anesthesia

By William N. Kemp, M.D.C.M., Consultant Anesthetist, Children's Hospital, Vancouver, B. C. The Williams & Wilkins Co. 1948. Price, $5.

This text has been prepared for the busy undergraduate to provide him with material dealing with some of the more common practices in the administration of general and regional anesthesia. It is intended as a supplement to and a review of the practical instruction in anesthesia, a subject often not given sufficient time in the curriculum of medical schools. The descriptions of the various forms of administering anesthetics and of the types of anesthesia applicable in specific conditions are very clear. A number of very fine illustrations will be found most helpful.

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Outline of Histology

By Margaret M. Hoskins, Ph.D., and Gerrit Ravelander, Ph.D., Department of Histology, College of Dentistry and the Graduate School of Arts and Sciences, New York University. Ed. 2. The C. V. Mosby Company, St. Louis. 1948. Price, $3.50.

This book should make a strong appeal to the student. It is a good format; the double columns make for easy reading; there is much blank space for notations and the illustrations are many in number and well made. They really illustrate. And, the price is reasonable.

Commonsense Psychiatry of Dr. Adolph Meyer

Fifty-two selected papers edited with biographical narrative by Alfred Lief. McGraw-Hill Book Co., Inc., New York. 1948. Price, $6.50.

This source book, which points up the evolution of Meyer's thought, traces the development of his commonsense approach to the problems of psychiatry from the time of his earliest work in Kankakee, Illinois, in 1893, through the years in Worcester, Massachusetts, New York City and Baltimore, where he was chief psychiatrist at the Johns Hopkins Medical School for almost thirty years. It presents Doctor Meyer's teaching in his own words of his principle of treating the "whole" patient, mind and body, and provides as well a fascinating story of his life and work.

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Magic in a Bottle

By Milton Silverman, San Francisco. The Macmillan Company, New York. 1948. Price, $3.50.

This is the story of drugs—of morphine, quinine, novocaine—of digitalis, vitamins, and penicillin. This is the story also of the men like Ehrlich, Lister, Fleming and Florey.

In this book unfolds the fascinating details of the search and human struggle behind the chief drugs of modern medicine. He vividly recounts how Sertuerner discovered morphine, how digitalis came into use, and how the mistake of a German chemist led to the discovery of aspirin. He tells how Eijkman discovered vitamins and of the long struggle to find a cure for epilepsy. The story of brilliant genius and intense rivalry behind the wonder-working sulfa drugs is narrated and how a miraculous accident brought about the discovery of penicillin. Finally, the author tells one of the most inspiring stories in the history of science—that of Madame Curie and the development of her discovery to its present place in radiation therapy.

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The Case of Augustus d'Esté

By Douglas Firth, M.D., Fellow of Trinity Hall, Cambridge. Cambridge, at the University Press, New York. The Macmillan Company, New York. 1948. Price, $1.75.

Small collection of letters, diaries, account books and other manuscripts, kept or written by Lady Augusta d'Ameland and her son Sir Augustus d'Esté between 1793 and 1847. They came to light in 1940 during the drive for waste paper. Pilfering rats and other unknown factors had caused the destruction of much interesting material, but what is possibly the earliest clinical account of disseminated sclerosis, albiet written by a layman, survived.

The Case Against Socialized Medicine: A Constructive Analysis of the Attempt to Collectivize American Medicine

By Lawrence Sullivan. The Statesman Press, Washington, D. C. 1948. Price, $1.50.

This book presents in two-minute chapters the historical background of Socialized Medicine, as now advocated in the United States. It is a book of far-reaching significance, for if American medicine can be taken over by the Government, then every other activity also may be socialized under a gigantic federal bureaucracy.

The story is told principally from the sworn testimony of witnesses before the Committees of the House and Senate. Straightforward, clear, succinct, it weighs without partisanship the story of Socialized Medicine in other lands. It tells what happens when people lose the right to select their own doctor. It tells how medical education curdles under the lash of executive-order control. It tells what happens to the health of a nation when village doctors are selected like postmasters.

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Technic of Medication

By Austin Smith, M.D., Secretary, The Council on Pharmacy and Chemistry, The American Medical Association. J. B. Lippincott Company, Philadelphia. 1948. Price, $4.

A book of practical usable information designed to aid the physician in the performance of his daily tasks, aid in determining the need of medication, choice of route of administration, such as oral, rectal or genitourinary, possible effects of proposed therapy, and desirable supporting measures.

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Medical Statistics from Graunt to Farr

By Major Greenwood, F.R.C.P., Professor Emeritus of Epidemiology and Vital Statistics in the University of London. Cambridge University Press. The Macmillan Company, New York. 1949. Price, $2.

This is a compilation of The Fitzpatrick Lectures for the years 1941 and 1943, delivered at the Royal College of Physicians of London in February, 1943.

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Textbook of Genitourinary Surgery

Edited by H. P. Winsbury-White, M.B., F.R.C.S., Lecturer Institute of Urology and Institute of Child Health, University of London. The Williams & Wilkins Company, Baltimore. 1948.

Covers the urinary tract and the male genital system from the surgical point of view. Very complete, covering nearly 1,000 pages with about 450 illustrations and a very full index. An excellent book for the specialist.

Control of Pain in Childbirth

By Clifford B. Lull, M.D., Director, Division of Obstetrics and Gynecology, Pennsylvania Hospital, and Robert A. Hingson, M.D., Associate Professor of Obstetrics, Johns Hopkins University; with an introduction by Norris W. Vaux, M.D., Professor Emeritus of Obstetrics, Jefferson Medical College. Ed. 3. J. B. Lippincott Company, Philadelphia. 1948. Price, $12.

This edition has been completely revised and brought up-to-date to conform with the many advances in the field. It now includes the latest information on the revolutionary technic of saddle block spinal anesthesia; an up-to-date re-evaluation of the toxic effects of all drugs now used in childbirth; a survey of fetal salvage at birth with various anesthetic agents; an entirely new chapter on mechanisms of protecting the baby during the vital first week of life, and a new chapter on anatomy and neurology. As in previous editions, the aim of this widely accepted book is the alleviation of pain during parturition without endangering maternal and fetal welfare. It coordinates and correlates current knowledge of the problems of analgesia, amnesia, and anesthesia in obstetric practice.

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Bacterial and Mycotic Infections of Man

Edited by Rene J. Dubos, Ph.D. J. B. Lippincott Company, Philadelphia. 1948. Price, $5.

The double column arrangement of this book makes the reading of the text comparatively easy, but the heavy paper used adds so much to the weight of the book that it can only be read by placing it on a support. The text offers a balanced presentation of parasitism in its biological perspective and leads to the actual clinical picture and activities of bacteria of diseases in the human body. It presents the physiologic response of the human as a host to the parasite. A brief review is given of the role that bacteria play in disease and a picture of the cycle of infectious processes; individual parasites are described. Fundamental principles of the management of infectious diseases are established from the viewpoint of therapy rather than actual disease.

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Drug Research and Development

Edited by Austin Smith, M.D., and Arthur D. Herrick, assisted by numerous contributors. Revere Publishing Company, New York. 1948. Price, $10.

The purpose of this volume is to promote an understanding of the development of drugs and drug therapy by presenting the essential background.

Pathology

Edited by W. A. D. Anderson, M.D., Professor of Pathology and Bacteriology, Marquette University School of Medicine. The C. V. Mosby Company, St. Louis. 1948. Price, $15.

In this volume is brought together the specialized knowledge of numerous pathologists in particular aspects or fields of pathology. While presented in an order and form to serve as a textbook, it is intended also to have sufficient comprehensiveness and completeness to be useful to the practicing physician.

The part played by the collaborators cannot be overemphasized. Each was selected because of his knowledge and proficiency to do some particular section of the book so that the completed volume would be strong in all departments. The material of the various collaborators was carefully correlated to present a unified whole.

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Hygiene: Manual of Public Health

By J. R. Currie, M.D., Professor of Public Health, University of Glasgow, and A. G. Mearns, M.D., Senior Lecturer and Examiner in Hygiene, University of Glasgow. Ed. 3. The Williams & Wilkins Company, Baltimore. 1948. Price, $9.

Completely revised, with addition of much new material. Vital statistics features biometrics and covers statistical methods, including graphical presentation and the Chi-square test. Section on food presents current legislation on milk with a new article on inspection of dairies and other food premises. Sections on water supply and infestation have been expanded.

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Atlas of Human Anatomy: Descriptive and Regional

By M. W. Woerdman, M.D., Professor of Anatomy and Embryology and Director of the Department of Anatomy, University of Amsterdam. Vol. I: Osteology; Arthrology; Myology. The Williams & Wilkins Company, Baltimore. 1948. Price, $12.50.

A beautifully illustrated atlas of the locomotor apparatus. The 500 plus drawings are well made and will be most helpful to medical students and others who are interested in anatomy.

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A. M. A. Interns' Manual

Published by W. B. Saunders Company, Philadelphia. 1948. Price, $2.25.

This splendid little book has been most helpful to many interns and will, no doubt, continue to be so. Every intern should have a copy.

Amiable Autocrat:
A Biography of Dr. Wendell Holmes

By Eleanor M. Tilton. Henry Shuman, New York. 1948. Price, $5.

A definitive biography of an American whose poems and epigrams still live on the lips of English speaking people everywhere and whose contributions to science are part of medical history. Presents a multitude of new facts no other biographer has used, forming a narrative of absorbing readability.

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A Textbook of Pharmacognosy

By Heber W. Youngken, Ph.D., Professor of Pharmacology and Biology in the Massachusetts College of Pharmacy. Ed. 6. The Blakiston Company, Philadelphia. 1948. Price, $8.50.

For the pharmacy student.

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Organic Chemistry: With Applications to Pharmacy and Medicine

By Eldin V. Lynn, Ph.D. Ed. 3. Lea & Febiger, Philadelphia. 1948. Price, $5.

This book reviews the basic reactions and applies them to the substances used in medicine and pharmacy.

The Skin Diseases

By James Marshall, M.D., Consulting Dermatologist, Central Middlesex County Hospital, London. Cambridge, University Press. The Macmillan Company, New York. 1948. Price, $7.50.

For the student and the practitioner.

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Textbook of Rheumatic Diseases

Edited by W. C. S. Copeman, M.D., Lecturer in the Medical School, University of London. The Williams & Wilkins Company, Baltimore. 1948.

Numerous contributors have covered the ground of rheumatic diseases fully, thus giving complete information on this important clinical entity.

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Conditioned Reflexes and Neuron Organization

By Jerzy Konorski, Head of the Department of Neurophysiology in the Nencki Institute of Experimental Biology and Professor in the University of Lodz. Translated from the Polish under the author's supervision by Stephen Garry. Cambridge University Press. The Macmillan Company, New York. 1948. Price, $4.

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Professor of Anatomy, University of Colorado School of Medicine, Denver, Colorado

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242 Pages (7" x 10"), 199 Illustrations, 19 in Color. $6.50

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